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PART FIRST.
ORIGINAL COMMUNICATIONS.

Art I.—*The Medical Properties and Therapeutic Effects of the Chlorate of Potash; including the History of a remarkable case of Hæmatothorax, successfully treated by this remedy.* By E. J. Fountain, M. D., Davenport, Iowa.

The introduction of this article, the chlorate of potash, into our materia medica, has been comparatively recent; and not until within the last few years has it attracted much attention from the medical profession. Even yet its power as a therapeutic agent is but little appreciated, and many of its properties are comparatively unknown. An experience of seven years in the frequent use of this salt in various affections and often with surprisingly favorable results, enables me to speak confidently of its properties as a medicine, and to present some facts in relation to the same heretofore unnoticed.

To the chemist the chlorate of potash has long been known as an article of great utility in the laboratory. In composition it has six equivalents of oxygen, and one each of chlorine and potassium.

Its chief characteristic consists in the facility with which it parts with its large excess of oxygen. By the application of moderate heat, about thirty-nine per cent. of pure oxygen gas is evolved, leaving as a residue the chloride of potassium. Advantage is taken of this property in the arts in making friction matches and priming for cannon and firearms.

In the present article I propose to show that this same property, viz. the large amount of oxygen in loose combination, constitutes it an agent of great power in the human economy, and furnishes us with the means of aiding the operations of nature in some of the vital functions of the body, and in important ways controlling the effects of disease and injuries. The peculiar mode of its operation, physiologically considered, will be noticed after presenting some evidence of its practical utility in the treatment of disease. From the facts and cases here offered, some data can be obtained upon which to found a tolerably well sustained opinion, relating to its physiological action in many conditions of the body, in which it manifests its greatest power, while in others it must remain as yet a matter of hypothesis. I will first notice its peculiar property in arresting mercurial stomatitis, as its utility for this purpose is more generally known than any other, and the testimony in its favor so strong as to leave no doubt of its specific action in this particular. In the latter part of the year 1857, I became acquainted with this property of the chlorate of potash by direct experiment. At that time I had charge of the hospital of the Panama Railroad Company at Aspinwall.

The peculiar type of the diseases prevailing on the Isthmus of Panama rendered the frequent and liberal use of mercurial preparations highly necessary, and as an unavoidable consequence often resulted in ptyalism. In one case that I had in November, 1851, the ptyalism was unusually severe. The patient had been under treatment for dysentery, from which he was recovering, when the salivation occurred. It soon became so excessive that the poor fellow rested constantly with his head leaning over the edge of the bed, unable to eat or speak, and with difficulty could even swallow a drink of water; while the viscid saliva ran constantly and profusely from his mouth. All the ordinary local applications were used to no purpose, and day after day passed without any relief, until I began to be really alarmed for his safety. While meditating upon what I should next try for his relief, it occurred to me that, inasmuch as the chlorate of potash was known to be useful in the ulcerative stomatitis of children, as recommended by Dr. West, it might possibly be of service in this affection of the mouth produced by mercury. With this view I gave him twenty grains every three hours, and directed him to use a solution of the same as a wash for the mouth. The effect of this treatment seemed like magic. In so short a time as twenty-four hours, the discharge of saliva had nearly ceased, the fœtor of his breath all gone, and he could speak plainly enough in expressing his thanks for the great relief he had obtained.

I was as much surprised as pleased with its happy effects, and directed him to continue the use of the medicine as before. In a few days he was entirely well. This was my first experiment with the chlorate of potash, in mercurial stomatitis, and the case was so remarkable in all respects, as to impress me at once with the belief of its power of arresting this extremely unpleasant affection. On the first opportunity following I tested its virtue again with equally gratifying result, and after this I used it in every case that occurred, and always with the same effect in producing a prompt and speedy cure. During the course of the year following, I communicated the knowledge of this property of the chlorate of potash to several of my professional colleagues, and particularly to Dr. I. M. Adler, who became associated with me as one of the surgeons of the Panama Railroad Company in 1852. From him I soon learned that his experience fully corroborated my own, and subsequently in our practice in that country and elsewhere we have found it a never-failing remedy. In this connection I will quote a few lines from a letter of Dr. Adler, in reply to a note of inquiry on this subject: "Sometime" he states, "in the winter of 1852, while we were engaged in the service of the Panama Railroad Company, you communicated to me the result of your experience in the use of the chlorate of potash in mercurial stomatitis.

Having encountered great difficulty in treating those aggravated cases which often occurred among the laborers and others employed in that work, from the necessity of using so commonly large and repeated doses of mercurials in combating the violent diseases of the isthmus, I immediately tested its efficacy. I have found its effects sure and immediate, and since that time I have depended on no other remedy. Such has been the uniform success following the administration of that salt in cases of mercurial stomatitis, that from my own experience I consider it an absolute specific. *It has never failed.* At the time you suggested the treatment it was entirely new to me, and from all the inquiries and investigations I have made, with regard to this special use of the chlorate of potash, I find no claim of discovery prior to your own."

In the January No. of Braithwaite's *Retrospect* of 1857, is an interesting article on the use of chlorate of potash, by Dr. Hutchinson. The article appeared originally in the *Medical Times and Gazette*, August, 1856. After illustrating its utility in ulcerative stomatitis by numerous cases, he reports three of mercurial ptyalism, which he treated successfully by the administration of chlorate of potash. Concerning this treatment he says: "At the time these cases were under treatment, I did not know but that they were the first in which this remedy had been tried in salivation; but more recently I have been glad to find much corroborative testimony in a paper published in the

Bulletin Général de Thérapeutique. for May of the present year. It would appear that M. Herpin, of Geneva. MM. Blache and Demarquay, of Paris, have all tried it, each in a series of cases, and with the most favorable results.

"To Mr. Herpin belongs the merit of having been the first to use it." The first notice of the use of this salt for mercurial salivation appeared from this eminent physician in the *Bulletin de Thérap.*, for March, 1855. There appears to be no claim made by any one to the trial of this remedy for the purpose under consideration, prior to this date. Dr. Hutchinson remarks: "to those who have confidence in the powers of the chlorate against other forms of stomatitis, the employment of it against that caused by mercury is but a very natural step, and there is nothing surprising in the circumstance that it should have suggested itself to several independent observers about the same time." This appears to have been the case with the European observers, by none of whom was it noticed until three years after I had commenced its use in practice. The difference in time is so great that it is but justice to myself to claim priority in the discovery. During the three years previous to the time when this remedy was first tried by M. Herpin, I had used it so frequently that it had ceased to be a novelty. So great became my confidence in it during that period that the liberal use of mercury, so frequently necessary in that country, was disarmed of its most objectionable feature by the facility with which its unpleasant tendency to produce ptyalism could be arrested.

In some cases where I have thought it necessary to continue the use of the mercury for a long time, and danger of ptyalism was apprehended, I have given the chlorate as a prophylactic. In this way, I believe, it anticipates and prevents the unpleasant effects of mercury, and enables us to pursue the treatment longer and with more confidence, when its continued administration is desirable. The following from the *Medical Times and Gazette*, Nov., 1856, gives the experience of M. Ricord to the same effect. "Several trials made by M. Ricord exhibit the power of this substance not only in checking mercurial salivation after the suspension of the mercury, but even when continued and increased. Of still greater importance is its prophylactic agency; for, in a considerable number of patients, some of whom were extremely susceptible of mercurialization, who took the chlorate from the commencement of the course, no salivation at all occurred."

It would appear that the chlorate of potash possesses the property of exerting a special influence over all inflammations affecting the mucous membrane of the mouth. To this we may perhaps except the syphilitic, and to some extent the nursing sore mouth. Occasionally I have found the chlorate of service in the latter affection, but it cannot be depended upon generally, the appropriate treatment being such as will restore to the blood its proper proportion of mineral and saline ingredients.

In the spring of 1855 there happened to be a deficiency in the supply of vegetables in this part of the country, in consequence of which very many of the poor people lived almost entirely upon salt meats, and the cheapest food which could be obtained. My attention was not called to this fact until I had seen a number of cases of sore mouth of a decidedly scorbutic character. By investigating the cause of the disease, with the view of determining its nature, I found these facts to be as I have represented, and a rational solution of the difficulty obtained. A peculiar type obtained in all the cases that came under my observation, to the number of about thirty or forty. In all, the gums were swollen, red and tender in the early period of the disease, with a tendency to bleed from slight causes. When the disease had advanced further, the gums were livid and spongy, rising up around the teeth, and frequently bleeding at the slightest touch. In these cases the breath was offensive, but there was no great amount of salivary discharge. The usual constitutional symptoms of scurvy were generally wanting. I frequently noticed a paleness of the complexion, and a general sallowness of the skin, but no purplish blotches or petecchial spots were observed upon the body, or any marked degree of muscular debility. In this respect the disease appeared in a type corresponding with that reported by Dr. Foltz, of the U. S. Navy, on the scurvy which appeared in the squadron blockading the ports in the Gulf of Mexico. That the disease was a mild form of land scurvy was evident from the symptoms and from the circumstances mentioned. Having much confidence in the chlorate of potash in mercurial stomatitis and other forms of inflammation of the mucous membrane of the mouth, I made trial of the same remedy in this affection, and in the same manner as recommended for ptyalism. The good effects were in every instance as prompt as in the latter complaint, and in every case that came under my observation no other treatment was required. That I might accurately determine the influence of the medicine, I did not direct any change in the diet during its administration, but after a cure was effected I recommended a more liberal use of vegetable food. In some instances all the members of a family, husband, wife, and several children, were alike affected, and in every case a speedy recovery followed the use of the chlorate of potash. A number of times I had calls from those in the country who had been cured by this treatment, requesting a large quantity of the solution for certain families in their neighborhood, affected in the same manner; and afterward I was informed that in all these cases the result was the same. So often did this happen that I learned to regard the remedy as a certain specific, and prescribed it in all such cases with the utmost confidence, and in no instance was I disappointed in my expectations.

Dr. Hutchinson reports a number of cases of phagedenic ulceration of the interior surface of the cheek, in which the internal administration of the chlorate was followed by a speedy recovery. In these cases no other remedy was given. Some of them had obstinately resisted all other modes of treatment for several weeks before coming under his care. The following case from my own practice presents a striking instance of its curative power, over the malignant form of ulceration of the pharynx. The patient was a boy about eleven or twelve years of age, whose general state of health was represented as having been very good. The family were living in a small ill-ventilated dwelling. I was first called to the patient about a week or ten days after the commencement of his sickness, when the parents began to think his condition really dangerous. Immediately upon entering the room, I perceived a very fetid odor, which I found proceeded from the breath and throat of the patient. All parts of the pharynx appeared to be in a gangrenous condition, much swollen and almost black in color. The odor was very powerful and extremely offensive, the character identical with that proceeding from a gangrenous and rapidly decomposing tissue. His breathing was much impeded, and from its peculiarity connected with the severe and extensive disease in the throat, I feared there was impending the danger of death from œdema of the glottis. He was in a semi-comatose condition, from which he could be roused to consciousness and apprehension of what was said to him only by considerable effort. At such times he could swallow a little liquid but with great difficulty. There appeared to be a quantity of vitiated mucus impeding the entrance of air into the larynx. To remove this and clear out the throat, I thought it best to give an emetic. I first applied a saturated solution of nitrate of silver to all parts of the throat, within reach, after which I gave twenty grains of ipecac., and five of tartar emetic, with ten grains of calomel. I left the same quantity of tart. emet. and ipecac., with directions to give a third of the mixture every twenty minutes until it operated. I returned to see the patient two hours after, and to my surprise and disappointment I found he had taken all I had left for him, without producing any symptom of vomiting. I immediately gave twenty grains of the sulphate of zinc, but with no better success. This convinced me that the stomach was insensible from deficient innervation, and argued unfavorably for the prognosis. As soon as I became satisfied that the zinc would not operate, I administered, as a last resort, a tablespoonful of mustard. I had great difficulty in getting the patient to swallow this, but finally succeeded, and anxiously waited the result. No symptom of vomiting was produced by even this expedient, and now his case appeared desperate. He had taken forty grains of ipecac., ten of tart. emetic, twenty of sulphate of zinc, and a tablespoonful of mustard, all without any effect!

The stomach was evidently insensible to any stimulus, and the patient was fast sinking into a moribund condition.

In this extremity I desisted from all efforts to produce emesis, and resorted to the use of the chlorate of potash, with but little if any expectation of doing any good, but administered as the only means at all likely to improve his chance of recovery. Fifteen or twenty grains were given in solution every two hours, and the extremities kept warm by hot applications. This was in the evening. In the morning, to my agreeable surprise, I found the patient a little improved. The various emetics, together with the calomel given, had operated upon his bowels in the latter part of the night, producing a profuse but not a violent catharsis. A little more warmth had returned to the surface of the body, and the breath was less offensive. I again applied the nitrate of silver as before, and ordered the chlorate to be continued in the same manner. From this time he steadily improved on the use of the chlorate of potash, with no other remedy. His recovery was quite rapid, so that within a week my attendance was discontinued, and the patient convalescent. In this case the putridity of the ulceration was so great that it filled the whole house with the most offensive odor. The partial asphyxia produced by the œdema about the glottis, and the contaminating influence of the gangrenous condition of the fauces, combined to poison the fluids of the body, interrupt the healthy action of all the organic functions, and indicated their effects upon the sensorium, by stupor and coma.

The degree to which this had arrived may be inferred from the complete insensibility of the stomach. A large quantity of a number of the most powerful emetics produced not the slightest effect. This fact impressed me with the belief that he was beyond all hope of recovery and no remedy could be of any avail. At this critical period, I abandoned all othe treatment, and administered liberally the chlorate of potash.

The result has just been stated. The immediate change in his symptoms, and the rapidity of his recovery, indicate very plainly the powerful and curative influence of this remedy under circumstances the most discouraging.

In presenting cases to illustrate the therapeutic effects of this remedy, I shall, for brevity, select but few from many that I might offer, giving only such as very strikingly exhibit the peculiar properties of the medicine in different diseases.

I will state in general terms, that I have given the chlorate of potash in many cases of ulcerative stomatitis, and have never known it to fail. With this I will leave the consideration of its application to diseases, affecting the mouth and throat, and present some cases where the organs of respiration are the seat of the disease, or where they are involved secondarily with other vital parts of the body. In all these cases, although they are entirely different in character from each other, *imperfect aëration of the blood*, from some serious impediment to respiration, forms one peculiarity. The first is a well-marked, and very malignant case of pneumonia typhoides; a disease, Dr. Hooker remarks, "in which the effects of imperfect aëration of the blood are remarkably prominent."

Case—Pneumonia Typhoides.—I was called on Friday, February 26th, 1858, to see Mr. Francis Graham, a young man of good constitution, and previous good health. I found him in high fever, which had been preceded for some days by loss of appetite and a sense of weariness and general lassitude. The tongue was brown, dry and hard, except at the edges, which were moist and red, and the papillæ elevated. He complained of great pain in the back, and constant nausea. which frequently resulted in vomiting. The high fever attended with great pain in the back, made me suspect it to be a case of variola, of which there was at that time a number in the city—while the appearance of the tongue, superadded to these symptoms so early in the attack, indicated a severe type of fever of some kind. The treatment for the time was based upon general principles, with the view of preparing the system for any definite line of treatment adapted to the peculiar nature of the disease yet to be revealed. A mercurial cathartic was followed by diaphoretics and sedatives for this purpose. A sinapism to the epigastrium and cold acidulated drinks somewhat alleviated the irritability of the stomach, but still the nausea and vomiting continued at intervals during the following day. The tongue continued dark and dry, and the fever and pain in the back of the same character.

Sunday morning, symptoms unchanged, except a general aggravation of all unfavorable appearances. The tongue was black and hard, and sordes accumulated rapidly on the teeth. The breath was quite fetid. About ten o'clock, he began to cough for the first time. This rapidly increased, and by twelve o'clock a copious viscid prune-juice expectoration followed. When I saw him in the morning, there had not been the slightest effort at coughing, or any symptom attracting my attention to the lungs; and my surprise was great when at mid-day I found him manifesting all the well-marked rational and physical symptoms of pneumonia. It involved the whole of the right lung with symptoms of congestion, and threatened invasion of the left. The true character of his disease was now apparent, as a very severe and malignant case of typhoid pneumonia. The physical prostration was very great. The secretions were assuming a putrescent character, as indicated by an extremely fetid breath, and the rapidly increasing sordes of offensive character on the teeth and under the whole surface of the mucous membrane of the mouth. His respiration was rapid, and labored, pulse frequent and oppressed. The surface of his body presented a dusky pallor. He passed his urine involuntarily and unconsciously in bed. His mind was generally clear in comprehending questions and giving answers, yet he was gradually, at this early stage of the disease, losing all consciousness of the functional operations of the body, and all power over their actions. The extreme rapidity with which the symptoms peculiar to the latter stages of the typhus, and typhoid fevers, appeared in this case, indicated a virulence of disease of unusual severity and very alarming character. After a full consideration of the nature of the case, I concluded the indications to be fulfilled at this stage of the disease were of a threefold character; *first*, to sustain the failing powers of life by stimulants and tonics; *second*, to subdue the local inflammation of the lungs; and *third*, to arrest the tendency to putrescent degeneration of the fluids, and sustain the functions of respiration, by furnishing the system aids in the oxygenation of the blood, and favoring the diminution of its rapidly increasing impurities. To fulfill the first, quinine was given as a general tonic and stimulant, and to promote contraction of the relaxed tissue of the lungs. To this was soon added the more active stimulation of brandy and ammonia; constant support to the function of nutrition, and repair of the waste of the tissues was furnished by the regular and frequent administration of strong beef tea. For the second indication, a large blister was applied to the whole of the affected side, and internally was given a diaphoretic and sedative mixture, of the compound spts. of ammonia, syr. ipecac., and tincture aconite. To fulfill the third indication, the chlorate of potash was freely administered. His medicines were directed to be given punctually every hour as follows: First, a pill containing two and a half grains of quinine, the next hour the diaphoretic mixture, and the next fifteen grains of the chlorate of potash, in solution, then the quinine again, and so on in alternation, each every three hours. A little barley-water and beef tea were given occasionally in the intervals.

On the following morning the blister had raised well, the fœtor of his breath had disappeared, his respiration was less hurried and his complexion not so livid, but otherwise, his symptoms appeared desperate; a diarrhœa had set in toward morning, his evacuations and the passing of urine being involuntary, and with entire unconsciousness of their occurrence. A large mass of black and tough sordid accumulation was taken from the roof of his mouth, large enough to completely fill the cavity to a level of the lower margin of the gums, and extending back to the palate. The black sordes had to be almost hourly removed from his teeth and tongue, with the aid of acetic acid. The bloody viscid expectoration was to-day very abundant, mucous râles over all the right side of the chest, and slight crepitation over some portions of the left. Pulse very rapid and weak. A powder containing half a grain of morphine, five grains of tannin and two of acetate of lead, checked the diarrhœa. The same medicines were given every hour as the day before, and brandy now added with the beef tea, in the intervals, every two hours.

Tuesday, patient extremely low, believed to be dying, by all the family and friends. The diarrhœa had returned, but was kept in check by the same powders as before. Pulse hardly perceptible. A mass of accumulated sordes removed from his mouth, the same as on the day previous. Expectoration still viscid and bloody, but less abundant; mind wandering most of the time, but no delirium, no fœtor of the breath; color of the skin natural. Substituted carbonate of ammonia and brandy for the diaphoretic mixture, doubled the doses of chlorate of potash, and gave the quinine as before.

The further history of the case, I will briefly give in outline only. He continued a few days in the same critical situation as last described, during which time the quinine, chlorate of potash and brandy were given unremittingly, by which the disease, local and general, was gradually subdued, and the vital forces kept in action and supported; the expectoration rapidly diminished. By the latter part of the week, the stimulants were given less frequently, and the chlorate of potash gradually withdrawn, as the secretions began to assume a more natural character, and the respiration was more easily performed.

All signs of the pneumonia soon disappeared, and the convalescence was very rapid.

Attendance was discontinued in eighteen days, and the patient was able to leave the house and walk about without inconvenience in three weeks, from the first development of the disease.

The value of the chlorate of potash in this case was strikingly evident by the arrest of the fœtor of the breath, the change in color of the skin, and less labored efforts of respiration. The several principles of treatment appeared equally indispensable, and while I regard the constant administration of quinine and brandy, with the liberal use of nutritious diet, as the sheet-anchors in the means used for his restoration, yet I am equally positive in the belief that these would have been unavailing without the powerful and efficient aid of the chlorate of potash.

I will now call attention more particularly to the peculiar property of the chlorate of potash, which I consider paramount to all others, and one which appears to be entirely unnoticed in any practical application by the profession generally. This property is manifested in its power as an oxydizing remedy by which the chief function of respiration is aided and supported as its primary effect, and secondarily the process of absorption is stimulated and increased by its agency. This has been partially exemplified in the preceding case, but in those which will be presently related this effect will be far more strikingly manifested, and its practical utility shown to be of the utmost importance.

The first illustration of the efficacy of the chlorate of potash in promoting arterialization of the blood which came under my observation, was manifested in a case of cyanosis from disease of the heart. The patient was under the care of my brother, Dr. Hosea Fountain, of Yorktown, New York, and by him was my attention called to the following phenomena: the cyanosis had existed for several years in an adult, from gradually progressing organic disease of the heart, attended with dyspnœa, general weakness, etc. As an experiment, he gave the chlorate of potash, with the view of furnishing oxygen to the blood. After the administration of a few doses, the peculiar blue color of the skin entirely disappeared, and the dyspnœa was very much relieved. When the use of the chlorate was discontinued, the blue color returned as before, and again disappeared when it was resumed. During the period of about a year following until the death of the patient, this article was used almost every day, and always with the same effect, establishing a direct connection, as cause and effect, between the administration of the chlorate of potash and the disappearance of the blue color of the skin—in other words, it directly *demonstrated* the fact that its administration arterialized the venous blood, which was circulating through the capillaries in all parts of the body. So striking was its effect in this particular, that it convinced me of its power as a remedial agent in supplying us with the means of meeting an important indication, frequently arising in the practice of both medicine and surgery. Since then, now many years ago, I have frequently used it for such purposes, and generally with happy effect. Two well marked cases will be given, which, with those preceding, will serve to illustrate the application of this remedy to instances of varying character in different departments of our profession.

Case—Hæmato-thorax from a wound of an intercostal artery.—Mr. Isaac Maas, aged 30, a man of strong constitution, and in perfect state of health, was wounded in the afternoon of the 14th of December, 1857, by a knife, which penetrated through the wall of the chest, under the axilla, on the right side. I was sent for immediately, but not found until about two hours after the occurrence. Upon my arrival, I found him in the care of Dr. Schlegel and two irregular practitioners. The patient was exhibiting symptoms of serious constitutional disturbance. His face was very pale, and his appearance wild and excited. His breathing was very rapid and much oppressed, and he greeted me with agitated and earnest entreaties to relieve and save him. He was not suffering with any acute pain, but a terrible oppression, and a sensation of impending suffocation. His call for water to allay his thirst was almost constant. His vision was very imperfect; the surface of his body was cold and pale, and covered by a clammy sweat, and his pulse was hardly perceptible. His appearance and general symptoms immediately impressed my mind with the belief that he was suffering from extensive hemorrhage, and my first inquiry was directed to this particular. I was answered that there had been but very little loss of blood, and no suspicion was entertained of internal hemorrhage. The wound had been united by sutures before my arrival, and this had been done while the pleural cavity was being rapidly filled with blood, escaping from a division of an intercostal artery! The wound was about three-quarters of an inch in length, penetrating through the fifth intercostal space, a little in front of the anterior edge of the scapula. The upper angle of the wound was against the lower margin of the rib. I was informed it had been made by a somewhat hook-pointed blade of a large pocket-knife. The right side of the chest was everywhere extremely dull on percussion, even as high as the clavicle in front, and there was an entire absence of all respiratory sounds over this region, and puerile respiration over the left. I immediately concluded that the intercostal artery had been divided, and extensive internal hemorrhage had taken place, filling the pleural cavity, and compressing the lung upon the spine. This fully explained all his symptoms, which were of a twofold character, resulting first from the loss to the circulation of a large quantity of blood, and secondly from the respiratory functions being impeded by the great compression to which one lung was subjected, excluding both the circulation of blood and the entrance of air. There had been no coughing of blood, or any coughing whatever, from which it was evident there was no wound of the lung itself. The wound had been united by sutures, and I now hesitated about the propriety of removing them, and endeavoring to secure the vessel from which the blood had escaped. The chest appeared already completely filled with blood, and to such an extent as to force down the liver below the edge of the ribs and the epigastrium, and crowded the mediastinum to the left of the median line. His chest was heaving violently and rapidly in labored respiration. He was almost pulseless, his countenance ghastly, and skin bloodless. His sight was so imperfect that he recognized me only by my voice. He was evidently in such a condition that the additional loss of even a small quantity of blood would in all probability be immediately fatal. I feared this if I attempted to secure the artery, and could only regret that I had arrived too late for this proceeding. Accordingly, I did not observe the directions of Mr. Guthrie in such cases, by reopening the wound, but believed it would be safer to try to arrest further hemorrhage by bandaging the chest to prevent all motion of the ribs on that side, and trust to the resistance of the already escaped blood, and the formation of a coagulum by external compression and perfect quiescence. Diffusible stimulants were immediately administered, and compression produced by applying strips of adhesive plaster as tightly as possible, from the spine to the median line in front, over the injured side. The whole side of the chest was covered with them, and so firmly as to completely arrest all motion of the ribs on that side, while the other was left free and unimpeded in the motions of respiration.

A roller was applied tightly around the whole chest over the adhesive plaster to restrain the violent action of the ribs on the uninjured side. Immediate relief to a considerable extent followed the application of the bandages. Three-quarters of a grain of morphine was now administered, and stimulants of ammonia and brandy ordered to be given frequently during the night. He passed a very restless night, but by aid of the stimulants, reaction was established by morning.

The pulse was now increasing in fullness, the excessive loss of blood being replaced by the water, which his urgent thirst had demanded during the night. Respiration still hurried and performed with a sense of insufficient effect to the patient. Apparently no further hemorrhage had taken place since the application of the adhesive strips and rollers, but a careful examination revealed more distinctly the extent to which the effusion had displaced the viscera of the chest and abdomen. The whole cavity of the chest on the injured side was completely filled with blood, compressing the lung so thoroughly that no air could be heard to enter even the primary bronchial passages, and the dullness was extreme over all parts of this side of the chest. There was no more resonance than could be obtained from percussing the thigh, or a solid block of wood, and this dullness extended over the epigastric region to a line midway between the lower end of the sternum and the umbilicus. In the chest itself, the pericardium and left lung were crowded a little from the median line by the pressure of the large mass of blood in the pleural cavity. Could this ever be absorbed to such an extent as to permit the liver to return to its normal position, and the compressed lung to expand sufficiently to resume its functions? We believed it next to impossible. The amount was so great, and the displacement of vital organs so extensive, that a fatal termination was regarded as almost inevitable. I will omit unimportant details of treatment, merely stating that he was watched almost constantly by either Dr. Schlegel or myself, and prescribed for on general principles as the symptoms indicated. In a few days he began to sink, and further consultation was determined upon.

On the seventh day after the injury, the patient was carefully examined by Drs. Adler, Langer, Schlegel, and myself. At this time, auscultation revealed the existence of congestion of the left lung. So great a tax had been suddenly thrown upon the left lung (already somewhat reduced in capacity) that it appeared as if about to give way to the strain. No symptom was more alarming than this. The dyspnœa was very great. He was unable, at any time since the injury, to assume the recumbent position, but had to be supported in a sitting posture, with the body nearly erect. His respiration was very rapid, varying from thirty-five to forty, and quite irregular; the pulse about one hundred, proportionally much slower than the respiration.

At a formal consultation, held in the evening of the day above mentioned, each in succession expressed the opinion that there appeared to be no chance or hope of his recovery. On requesting the advice of each as to the plan of treatment which might be adopted with the view of improving his chance of recovery, nothing was suggested more than palliating remedies, such as fomentations, anodynes, etc. It then occurred to me, that inasmuch as he appeared to be sinking chiefly from want of capacity on the part of the lungs to perform their great function of aërating the blood, I thought that possibly their office might be aided, and the blood oxygenized by the administration of the chlorate of potash. I related the history of the preceding case of cyanosis in explanation of my views, and as evidence that it possessed this power, and proposed to give it a trial in the present case. The proposition was readily assented to, and I prescribed twenty grains to be given in solution every three hours. Within twenty-four hours evident signs of improvement appeared. The respiration became less rapid, and he complained less of the distressing oppression through his chest, which had previously been so urgent. We were highly gratified to see this improvement continue. The chlorate of potash was given regularly and unremittingly night and day. All other treatment was merely adjuvant. Opiates were required for a time pretty freely to induce sleep, and poultices were occasionally applied over the injured side. In a few days he was removed to more comfortable quarters, and the chlorate given in doses increased to thirty grains every three hours. The stitches now parted from their hold, and the margin of the wound protruded considerably from the surface. At this time the right side of the chest measured an inch and a half more in circumference than the left. A tumefaction supervened about the wound, and a tendency to suppuration manifested. Poultices were now applied continually. Paroxysms of great distress and prostration occasionally occurred, but from these he would soon rally, and the general and slow improvement continue. Suppuration in the parts about the wound commenced December 26. The discharge was very copious. The pus had burrowed extensively between the muscles and fascia of the walls of the chest. Strips of adhesive plaster were applied underneath the wound, to effect local compression, and the poulticing continued. His urine now became loaded with non-crystalline organic deposits, presenting somewhat the appearance of a purulent character, but on subjecting it to microscopic examination, I found it composed of globules of less opacity than pus, and presented no appearance of nuclei on the addition of acetic acid. The urine was sufficiently abundant, and there were no indications of any disorder of the kidneys or bladder. We were disposed to regard the urinary deposit as evidence of rapid absorption of the blood from the pleural cavity, and that some portion of the disintegrated deposit in a state of solution was eliminated by the kidneys, and appeared partially reorganized in the urine.

Early in January, the patient, who had been doing well up to this time, suddenly began to fail. The pulse ran up to one hundred and twenty, and the respiration increased in frequency to thirty and thirty-five per minute. Stimulants failed to afford any relief. For two days he continued in an extremely critical situation, and we all believed he would survive but a very short time.

I then discovered that the attendants had discontinued giving the chlorate of potash since the day previous to his last sudden change. His improvement had been so steady and uniform that they presumed to think its further use unnecessary, and discontinued it without my knowledge.

I immediately gave a very large dose, about fifty grains, and repeated it in a short time, and then resumed its administration as before. In less than six hours the patient showed signs of improvement by less frequent and oppressed respiration. In twenty-four hours his respiration again returned to twenty-two or twenty-four, and his pulse dropped below one hundred.

By the day following, he felt as well as before this sudden change in his symptoms. From this time, no doubt was entertained of the direct agency of the remedy in promoting his recovery. The amount of suppuration gradually diminished. Occasionally after this he would feel very bad for a short time, but it was owing to some temporary disturbance, and did not seem to retard his recovery. By the latter part of the month his improvement was so great that the chlorate of potash was gradually discontinued, and nitric acid substituted for a short time. As this case is an interesting one of very unusual occurrence, I will briefly conclude its history. He continued steadily improving, and was soon able to sit up part of the day, and walk a little about the room. The right side of the chest still remained as dull as ever, and no respiratory murmur could be heard on auscultation, but the respirations were becoming easier and less frequent; urine still cloudy. I now prescribed cod-liver oil and the syrup of the iodide of iron and manganese. By the first of February he could walk downstairs, and venture a little out of doors each pleasant day. Iodide of potassium was substituted for the iron after the latter had been taken about two weeks. About the first of March, a faint distant bronchial sound could be heard in respiration over the root of the lung. The dullness still continued the same. The principal uneasiness sometimes amounting to quite severe pain, he felt in the epigastric region where it was still hard and dull. The slightest exertion quickly increased the respiration, and occasioned a sense of suffocation, and more or less dyspnœa. In this condition he remained with slow and variable improvement for a number of months, when the aids of a change of air and entire freedom from business cares by travelling abroad were recommended. Upon this suggestion, and prompted by his own inclination, he left on a trip to Europe in the month of August, seven months after the injury. By this time the line of dullness had almost, but not quite, receded from the epigastrium and the lower border of the ribs, and indistinct and distant respiratory sounds could be heard over the greater part of the chest. Absorption had evidently taken place to a great extent, permitting the return of the liver and diaphragm nearly to their normal position, and the lung to expand sufficiently to admit the entrance of considerable air in breathing. The general dullness still existed, but much less in degree, indicating that a layer of uncertain thickness of hardened and probably semi-organized blood still remained in contact with the pleura costalis completely incasing the lung.

The history of this case furnishes direct evidence of the value of the chlorate of potash in aiding the function of respiration, when mechanically impeded by the compression of fluids or solids in the cavity of the pleura. To its efficacy in supplying the blood with its vital element of oxygen was unquestionably due the recovery of the patient. As if to confirm and demonstrate its therapeutic effect in this particular, it was, unintentionally on my part, discontinued for a few days, when the patient immediately relapsed, and again as rapidly improved when it was resumed. When he passed from under its influence, his respiration became hurried, difficult, and oppressed. and so great was the prostration, and so alarming the symptoms, that we all believed a fatal termination would soon follow. At this critical period, for the second time in his case, the chlorate was again administered, and quickly the respiration was quieted down to its previous standard, the dyspnœa was entirely relieved, and all his alarming symptoms dissipated.

As an instance in medical practice, strictly analogous to the above, I will briefly state the effects of the chlorate of potash in a severe case of *hydro-thorax*. The patient, Thomas Smith, a young man aged 23, of delicate constitution, and predisposed to phthisis, was attacked with a violent inflammation of the right pleura, in the latter part of December, 1858. This resulted in rapid and extensive effusion of serum into the pleural cavity, which became so completely filled that the dullness extended to the summit of the lung. The fluid apparently filled the pleural cavity to its utmost capacity. I will omit all details of symptoms and treatment, excepting such portions as have a direct relation to the subject under consideration. The symptoms of the patient were, in all respects, characteristic of the existence of hydro-thorax of the most alarming character, among which rapid respiration and dyspnœa were the most prominent. At this time and previously he had been treated as is usual in such cases, by purging, blistering, mercurials, etc. Depletion by bleeding had not been resorted to on account of his previous constitutional debility.

In a consultation had at this time, the case was considered extremely critical, but I was soon encouraged by some sign of improvement. The respiration became less oppressed, and by percussion and auscultation it became evident that the fluid was diminishing in quantity. This improvement continued for about a week, and then he remained in an unchanging condition for about the same length of time; symptoms of derangement of the left lung now began to appear, indicated by mucous râles, pain and cough. The right lung had as yet but partially recovered its capacity, and now the aëration of the blood was interfered with to a considerable extent, by the congestion and bronchial secretion in the left. The effect of this soon became manifest in hurried respiration, increasing dyspnœa and restlessness. Active measures were resorted to with the view of arresting this complication, but without any avail.

He failed rapidly until, on the 28th of January, his condition appeared more hopeless than at the previous critical period. His cough became very severe, accompanied with a muco-purulent expectoration. Dullness over the inferior and posterior part of the right lung, irregular crepitation and subdued respiratory murmur, but no appreciable dullness, over a great portion of the left. Respiration 28 and frequently 30; pulse 100. At this time I discontinued all other treatment and prescribed the chlorate of potash, fifteen grains every two hours. An opiate was given at bed-time, as had been required, and taken for many evenings previous, and with this exception he took no other medicine but the chlorate of potash, from the time it was ordered. On the following morning I found him much improved. Respiration 22, pulse 90, breathing easy; expresses himself feeling much better, continued the chlorate, giving thirty grains every two hours. January 30th, improvement still continues, respiration reduced to 20, pulse 84. January 31st, respiration the same as day previous, other symptoms improving. On the first day of February his respiration was as low as 18; no dyspnœa; cough easy; expectoration free, and from its purulent character accompanied by night sweats, great emaciation, etc., was indicative of tubercular disease. This complication retarded his recovery, but he slowly improved and was able to walk about by the first of March, and nearly acquired his usual health and appearance before the first of April. The chlorate was given regularly for more than two weeks, and gradually withdrawn as his symptoms improved. In this case the efficiency of the chlorate of potash was tested in such a manner as to leave no doubt of its agency in producing a sudden and favorable change. The dyspnœa was very urgent. We had in vain tried all other means for his relief, and it was only when his case appeared to be hopeless, that the chlorate was given. It was administered freely, and in twelve hours his respiration was reduced from thirty to twenty-two, his dyspnœa relieved, and the patient rescued from the danger of impending dissolution to comfort and comparative safety.

I will not stop here to discuss what value this salt may possess as a remedy for scarlatina. I will merely say that I regard it as one of the valuable remedies we have in the treatment of some forms of this disease; but by no means as a specific. My object is not to present the claims of this medicine as a specific in any disease (excepting perhaps, mercurial and ulcerative stomatitis), but to *establish a general principle* of its action by which it can be applied to a great variety of diseases in certain stages and conditions. If I succeed in this it will be found to have a wide range for its sphere of usefulness, and will establish in therapeutics a principle of treatment, coextensive with the practice of medicine and surgery.

It is hardly necessary for me to state that the abstraction of oxygen from the atmosphere is the great function of respiration paramount to all others; and next to this is the evolution of carbonic acid, but this is a depurating, while the former is a vitalizing process. Modern researches have established these truths beyond all controversy, and it is no longer contended that the oxygen merely decarbonizes the blood without entering into the circulation, except by those entirely unacquainted with the present state of physiological science. *Oxygen is the great motive power of the human machine.* It is "the leaden weight or bent spring which keeps the clock in motion, and the inspirations and expirations are the motions of the pendulum which regulate it." Without the constant influence of this agent, all the primary functions of the body, animal and organic, would immediately cease. Dr. Carpenter, in his *Human Physiology*, says: "The introduction of oxygen into the blood is necessary for the maintenance of those peculiar vivifying powers by which the nervous and muscular systems are kept in a state fit for activity, and its union with their elements appears to be a necessary condition of the manifestation of their peculiar powers." The sources of carbonic acid are given as follows: "First, the continual decay of the tissue common to all organized bodies; second, the metamorphosis peculiar to the nervous and muscular tissues, *which is the very condition of the production of their power;* and third, the direct conversion of the carbon and hydrogen of the food into carbonic acid and water, which is peculiar to warm-blooded animals."

In this quotation the author points out the sources of carbonic acid, but it will be observed that in all these changes the presence of oxygen is a prerequsite. The process of disintegration within the body, like that of the decay of all organganized bodies without, is one of slow combustion; and in each the first product is carbonic acid, formed by the union of the free oxygen with the carbon of the tissues.

With every breath that we draw, and every motion of our bodies, oxygen is required to furnish the power which is called into activity by nervous influence. When we consider how universal and how constant are the demands for this vitalizing element, can we wonder at the mischief produced by withholding from the body its regular supply? And when we consider how frequently this supply is interrupted in the course of disease, it appears strange that this subject has received so little—I might almost say *no* attention at the hands of the profession.

I do not find any notice of this subject in relation to its modifying influence in disease and therapeutic indications except in the excellent essay on "The Relation between the Respiratory and Circulating Functions," by Dr. Charles Hooker, published in 1838. In this the author shows how frequently disease is aggravated by this complication, viz., imperfect aëration of the blood, and the therapeutic indications are very clearly pointed out, but the means recommended, though useful indirectly to a certain extent, were far inferior to such as I believe we now have at our command. In all probability the very little attention this paper has received may be owing to the inefficiency of the remedies proposed.

I will briefly notice some of the pathological indications of *imperfect aëration of the blood.* Some have been already presented—viz. when it resulted from mechanical diminution of the capacity of the chest or lungs, as in hæmato-thorax and hydro-thorax; and again in typhoid pneumonia, in which this condition is a constant and prominent feature. Some of the older authors correctly described the symptoms peculiar to this condition, and attributed them to the right source, but failed to draw any practical inference from it, or to observe the same influence in other diseases. Dr. Southwood Smith, in describing the phenomena of typhoid pneumonia, says: "The dark color of the skin, in some cases becoming quite livid, is one of the most characteristic marks of intense thoracic affection. In these cases it is not uncommon for the respiration to be from forty to sixty in a minute. The cerebral affection is equally peculiar and characteristic: it never consists of intense excitement, it is never accompanied with violent delirium; it is indicated by confusion and stupor, passing rapidly into coma; and it is attended with low muttering incoherence or disjointed rambling, the trains of ideas that pass through the mind being extremely faint, and linked together by no distinguishable affinity. We know that one of the most essential conditions to the due exercise of the sensorial functions is the due supply of the brain with arterial blood; but in this state of the system, arterial blood does not and cannot circulate through the brain, because it is not formed in the lungs; the patient is in a state approaching to asphyxia, and in very severe cases he remains for several days in as perfect a state of asphyxia as seems to be compatible with life. Why debility should, in these cases, be carried to the utmost possible extent, why such cases should form the most exquisite specimens of the adynamic state, need not be pointed out; the disease is concentrated in the very organ which elaborates the pabulum of life, and that stream which should convey its vivifying and animating influence to every nook and point of the system, is corrupted at its source." Dr. Hooker points out the frequent occurrence of imperfect aëration of the blood in a variety of diseases, as *typhous fever*, *congestive typhus*, *pneumonitis*, *pneumonia typhoides*, and *delirium tremens*, in which the imperfect aëration of the blood is occasioned in part by local engorgement of the lungs, and partly by disordered function of the motor respiratory nerves: and in some forms of *typhoid fever*, *scarlet fever*, *erysipelas*, *malignant cholera* and *asthma*, in which it occurs from disordered function of the organic respiratory nerves. In this connection he remarks: "Attentive observation of the symptoms in particular cases is requisite to ascertain whether there is any mechanical impediment to the expansion of the chest, or whether the fault is in the air-passages, the lungs, the motor respiratory nerves, or the organic nerves of respiration. A correct diagnosis in regard to these circumstances is highly important in a therapeutic point of view."

Dr. Hooker justly claims the credit of being the first to propose the use of medicines with a view *to promote arterialization of the blood*. But this amounted to a proposition only, as all of the remedies recommended have no direct agency or power to fulfill this indication, and their supposed action in this respect is quite hypothetical. These medicines consist of all the ordinary means used to depress the action of the heart, such as venesection, antimony, ipecac., digitalis, etc. Next, remedies which excite and invigorate the motor and organic respiratory nerves, in which are the general diffusible stimulants, as ether, and nitrate of silver for the same effect upon the organic nerves of respiration. In addition to these, ventilation, and remedies which excite vicarious secretions, and others which remove mechanical impediments to respiration, include all which the author proposes. It will be observed that no remedy proper is proposed, which directly promotes the arterialization of the blood. This construction has been placed upon the action of almost all the remedies used in the treatment of fevers and inflammations. The effects of all these we can understand from their well-known properties for which they are ordinarily prescribed, and attaching to them another property which at best is but vaguely apparent, if at all comprehensible, is probably the cause of the little attention which has been paid to this theory since it was offered to the profession.

At the time the essay was written, the physiology of respiration was but imperfectly understood, compared with the discoveries which have since been made, in this department. It was then unsettled, as the author admits, whether the oxygen of the atmosphere was taken up unchanged into the blood, or merely aiding in decarbonizing the blood in the lungs, without entering into the circulation.

This is no longer a disputed question. It is now well known that "there is an absolute removal of oxygen from the air during the process of respiration, and not a mere conversion of this gas into carbonic acid."—*Carpenter's Human Phys.* When this due supply of oxygen is interrupted in any manner, the effects are immediately apparent, and its wants are felt in all parts of the system. If this want is not supplied it constitutes a state of complete or partial asphyxia. To remedy this when it occurs during the progress of disease, there can, of course, be but one effectual method, viz. to supply the blood with that all-important element, for the want of which such serious effects are produced. What Dr. Hooker endeavored to do indirectly, I propose to accomplish directly and efficiently, by the aid of the chlorate of potash. I believe it has been shown that in this remedy we possess the remarkable power of *directly promoting the arterialization of the blood.* I think the effects of this salt, in the case of cyanosis, which I have related, approach to a positive demonstration of this fact. In this instance the experiments may be considered as mainly physiological, inasmuch as it gave but temporary relief, and as a therapeutic agent could have no influence over the organic disease of the heart upon which the imperfect aëration of the blood depended; but in other cases which I have presented, its agency, in this respect, was equally apparent, and in the highest degree of practical utility. Two cases have been given in which I think it was evident that the chlorate of potash *supplied the blood with oxygen* sufficient to sustain life during the time when respiration was seriously impeded, in one case by blood, and in the other by water in the cavity of the pleura. In each of these cases, the deficient arterialization of the blood was aggravated by an engorgement of the opposite lung; and not until the dyspnœa had become extreme, and the danger so great as to preclude all hope of recovery, was this remedy administered. In another case of a different character, where the imperfect aëration of the blood was the combined effect of an asthenic fever and a local engorgement of the lungs, the same benefit followed its administration. The dyspnœa was relieved, and the blood kept in a due state of arterialization while other remedies were being administered, and thus afforded an opportunity of producing their appropriate effects.

The chlorate of potash may answer another and valuable purpose in promoting absorption. Dr. C. J. B. Williams, in his "Principles of Medicine," remarks: "As a free circulation of blood probably promotes the removal of effused solids, partly by further oxygenating them, the idea is suggested that we may aid this process by the internal exhibition of agents which contain a large proportion of oxygen in loose combination. Nitric acid answers to this description, and whether this be one mode of its action or not, I can affirm from much experience in its use that it is the best medicine that I know for the state of convalescence from inflammations."

Such was the suggestion of Dr. Williams. If the idea is correct, then the chlorate of potash administered for so long a time in the case of Mr. Maas, answered another and valuable purpose, other than relieving the danger and distress arising from imperfect respiration; for if ever an agent was needed to remove effused solids, it was in this instance, and the absorption of so large a quantity of blood from the pleural cavity in a comparatively short time, would seem to add some confirmation to the opinion. Nitric acid may possibly act to some slight extent in the manner suggested, but as yet the opinion is entirely hypothetical. Moreover, strong objections can be made to the opinion that we can derive any such advantage from nitric acid. It will be difficult for a chemist to understand how this decomposition and assimilation can be effected in the human system, to the extent required for this purpose, and no practical evidence has been furnished to give weight to the opinion. But we know that chlorate of potash readily parts with its oxygen by the influence of a moderate degree of heat or a weak acid—both of which exist in the body in sufficient amount to effect the decomposition to a greater or less extent. This is the theory; and practical confirmation has been made by the cases herewith reported. If by increasing the amount of oxygen in the blood, we enhance its power of removing deposits, then do we have in the chlorate of potash another property of extensive application and great practical utility. It would render it doubly applicable to all cases where respiration is impeded by effusion within the chest, of liquids or solids requiring decomposition for absorption, such as hæmatothorax, empyema, and the hepatized stage of pneumonia.

As most of the products of inflammation consist of protein compounds in some form or combination, the addition of one or two equivalents of oxygen render them soluble by conversion into the *deutoxide* or *tritoxide*, and permits their absorption by endosmosis into the adjoining vessels.

Even tubercular deposits are known to consist principally of protein compounds, and we all know that the most effectual means of retarding or preventing their development consists in active out-door exercise in the pure air of the country, by which the system is supplied more freely with oxygen, and the effete products of interstitial decay more rapidly removed.

Absolute deprivation of exercise, even in pure air, will lead to the deposit of tubercles. This has been well illustrated recently by Drs. Byford and Graham, of Chicago, in experiments upon animals, and confirmation of the opinion is found in the lungs of stall-fed cattle, the same as in the caged monkeys of Paris. The rationale of this can be readily understood when we consider that the circulation is of necessity retarded by want of exercise, and this involves an imperfect removal from the system of such portion of the products of organic decay which results in a deposit of tubercles. The same effect is more frequently the result of living in crowded and ill-ventilated apartments, where the inmates habitually breathe an atmosphere, not only rendered impure by exhalations from the lungs, but also rendered less vitalizing by containing a lower percentage of oxygen. Now, although the blood may circulate freely enough by means of exercise, yet it has not sufficient power, by means of a due proportion of oxygen, to carry on, in a healthy manner, all the functions of the body, and, in the same ratio, remove all its impurities. The most uniform effect of this retention is a tubercular deposit in the lungs or elsewhere, and this effect is most marked where the two causes are combined, viz. a lack of exercise while living in crowded and ill-ventilated apartments. The limits of this article will not permit me to enter into a full consideration of this subject, and, at present, I merely offer the suggestion that we may find in the chlorate of potash an agent of some value in arresting the deposit of tubercles. This train of thought has naturally followed the hint of Dr. Williams, that we may possibly aid the removal of deposits "by the internal exhibition of agents which contain a large proportion of oxygen in loose combination." I think I have shown that we have such an agent in the chlorate of potash; and by it we may, perhaps, not only aid the removal of deposits, but possibly prevent this occurrence to some extent, in persons threatened with tubercles and other kindred affections. (The case of Thos. Smith gives some practical weight to this opinion. The symptoms of tubercular disease were well marked and alarming, yet they all disappeared while taking the chlorate of potash, which, at this period, was freely given for another purpose.)

The chlorate of potash has been quite generally used as one of the favorite remedies in scarlatina. I think it is justly so regarded, and has fallen into some disrepute of late by the error of depending too much upon its unaided influence.

It has generally been given with the idea that in chlorine something like a specific or antidote had been found for the poison of this disease.

Now, in truth the chlorate of potash is a valuable remedy in meeting particular indications in the treatment of this disease; by arresting the ulcerative inflammation of the fauces, and by its arterializing properties, supporting the recuperative powers of nature when aided by other appropriate treatment. In this connection I will state that I have been in the practice of late of giving it in combination with the carbonate of ammonia with the best effects. (Other aids in the treatment of this disease must vary according to circumstances, but I will mention two which I have found of great value in almost all cases: the application of pure nitrate of silver to the fauces, and of glycerine to the whole surface of the body.)

Some considerations induce me to think it is not the chlorine but the liberated oxygen which constitutes the chlorate of potash—a remedy of value in scarlatina and kindred diseases. If its virtue consisted in the chlorine alone, would not the inhalation of this gas answer equally as well, if not better? There is reason to believe that the decomposition of this salt takes place to a greater or less extent in all parts of the body in which the blood has free circulation, and that its peculiar power in all putrescent diseases, and perhaps in the various affections of the mouth, may be due to the nascent oxygen exerting its peculiar chemical affinities at the instant of its liberation.

It is well known to chemists that oxygen and other gases, when in a *nascent* condition, possess properties and powers which are peculiar to that state. In this manner gold is dissolved in aqua-regia. When the nitric and hydro-chloric acids are united, a double decomposition takes place by which nitrous acid and chlorine are evolved, and it is the nascent chlorine which acts upon the gold. In pure chlorine gas the gold would remain forever unchanged, but at the instant of its becoming disconnected from some chemical combination it exerts an influence of unusual character, so that even gold yields to its newly acquired power. Again, chlorine acts as a bleaching agent indirectly by liberating free oxygen from the water of the dampened fabrics, and it is in reality the *nascent oxygen* which ultimately acts upon the coloring material. Chlorine has no effect upon goods which are perfectly dry; but let them be moistened with a little water and immediately the bleaching process commences. The presence of water being always necessary, it is reasonably inferred that the chlorine by its natural strong affinity unites with the hydrogen of the water, forming hydrochloric acid, and the oxygen is liberated in a free state by the decomposition. According to this view, the chlorine merely serves as the instrument by which oxygen is furnished in a nascent condition, and, as in the case of the chlorine in the aqua-regia, at the instant of its liberation it exerts a peculiar power which it has at no other time.

Is it not possible that as a disinfecting agent it operates in precisely the same manner? By it nascent oxygen may be generated from the vapor of the atmosphere, and at this instant unite with and change the character of many of the unpleasant and injurious effluvia.

May not the oxygen of the chlorate of potash in the same way correct or neutralize many morbific agents within the body? Though too subtle for detection by human skill, these agents may thus be changed and disarmed of their danger by the operations of nature within her own laboratory.

It will be observed that many questions relating to this subject are yet open for investigation. One general principle of its physiological and therapeutic operation, I think has been fully established. Let this principle be kept in view, and indications for its use will be frequently observed. In other respects the hints which I have ventured to offer will, I trust, invite the attention of many to the consideration of this subject, and result in a better understanding of some questions which are yet involved in a degree of uncertainty.

Dr. C. H. Jones, of St. Mary's Hospital, England, expresses the opinion that "of late years we have been over-busy in accumulating facts without sufficient reference to principles; or to use Dr. Whewell's term, colligating ideas. Blood globules have been counted, tissues have been scrutinized, both healthy and morbid, secretions analyzed, symptoms described, and râles defined minutely. Far be it from me to decry this painful labor; it has produced fruit, and will, I doubt not, yet more. But have we not, amid all these particulars, thought too little of the general truths which they contain, and which we ought to strive to educe?"

No great objection can be made to this tendency, if such be the fact. All recorded observations and discoveries add to the storehouse of our knowledge, from which they may be gathered and classified at subsequent periods, and a true interpretation of their meaning obtained. In describing the symptoms of many diseases, writers have in all ages mentioned such as indicate plainly enough an imperfect arterialization of the blood. But very few have given to these symptoms a proper interpretation, and heretofore apparently no one but Dr. Hooker has deduced from them any important therapeutic indications.

I believe it has been reserved until the present time to furnish the means of meeting these indications in a manner which is strictly in accordance with scientific principles, and found to be successful when subjected to the test of practice.

The importance of supplying such a want must be apparent to all, and the means here proposed, are offered as worthy of trial. If found to be correct, it will establish a principle in therapeutics embracing a wide range in its operation, and, as manifested in the cases herewith reported, of the highest value in practical application.

[Note.—Its application to empyema is manifested by the following statement of Dr. Golding Bird: "The liquor puris of pus contains tritoxide of protein in solution, and the accession of oxygen would soon be able to convert the solid pus-particles into a similar state." In this manner pus may be absorbed while in state of solution, and reappear in the urine by a loss of a portion of the oxygen.]

ART. II.—*Report of the New York Eye Infirmary for March and April,* 1859, *with remarks on Cases and Treatment.* By F. J. BUMSTEAD, M.D. Assistant Surgeon.

DISEASES OF THE EYE.

Inflammation of the Cellular Tissue of the Orbit	1
Intra-orbital Cyst	1
Injuries of the Lids	3
Inflammation and Abscess of the Lids	6
Tumors of Lids	12
Entropion and Ectropion	4
Trichiasis	1
Diseases of the Lachrymal Passages	16
Tinea and Lippitudo	57
Hordeolum	10
Conjunctivitis simple	140
" catarrhal	4
" gonorrhœal	1
" purulent	2
" neonatorum	6
" phlyctenular	119
" granular	82
Pterygium	2
Pinguecula	1
Keratitis	27
Ulcer of the Cornea	3
Opacity " "	25
Foreign particles	13
Slough of Cornea	7
Staphyloma	12
Kerato-Iritis	2
Sclerotitis	4
Iritis	18
" syphilitic	4
Prolapsus Iridis	2
Cataract	17
" traumatic	4
Asthenopia	8
Muscæ	1
Choroiditis and Retinitis	9
Amaurosis	17
Glaucoma	1
Myopia	2
Presbyopia	1
Paralysis of Facial Nerve	1
" " External Rectus	1
Strabismus	9
Exophthalmos	1
Injuries of Globe	22
Diagnosis not recorded	10
	717
Diseases of the Ear	45
Total	762

Operations.—For tarsal tumor, 7; for entropion, 3; for trichiasis—by cutting down upon the bulbs of the misplaced lashes, and destroying them with nitric acid, 1; Bowman's operation on lachrymal passages, 2; for intra-orbital cyst, 1; for strabismus, 7; excision of the globe, 3; for staphyloma, 1; removal of superficial opacity of the cornea, 1; for cataract, 11 (eight by keratonyxis, one by reclination, one by extraction of lens, and one by "linear" extraction); Gräfe's operation of excising a portion of the iris for glaucoma, 1. Total, 38.

Entropion.—Two cases were operated on by scalping the free border of the lower lid. In a third case, in which both lower lids were strongly inverted, Dr. Hinton performed a new operation, viz. the free incision of the external canthus, so as to enlarge the palpebral opening and diminish the action of the orbicularis muscle, which appeared to be the chief cause of the entropion. A small, sharp-pointed tenotomy knife was passed into the palpebro-ocular fold at the external angle of the eye, and, transfixing the skin at the margin of the orbit, the tissues were freely divided. The skin and mucous membrane of the lower margin of the incision were brought into apposition and held in contact by a single suture of fine iron wire, so as to prevent union of the edges of the wound.

The result of the operation was very satisfactory. The edges of the wound did, indeed, partially unite in spite of the wire suture, but still the palpebral opening was permanently enlarged to a certain extent, and at the present time (six weeks after the operation), the lashes, which before the operation swept the cornea, are turned outward in a natural position. This operation, original, I believe, with Dr. Hinton, was performed by him on another patient six weeks ago, with an equally favorable result.

Diseases of the lachrymal passages.—Mr. Bowman, of the Moorfields Ophthalmic Hospital, London, in the first number of the *Ophthalmic Hospital Reports*, Oct. 1857, published a valuable paper on a new method of treating obstructions of the lachrymal passages. Already in a paper in the Medical and Chirurgical transactions for the year 1851, Mr. Bowman had shown the advantage of laying open the lachrymal canal on the side toward the conjunctiva, in those cases in which the punctum is everted from the globe, and thus enabling the tears to again enter the canal. Subsequently this treatment was extended to cases of epiphora, dependent on lachrymal obstructions, since experience showed that a free communication between the conjunctiva and sac afforded great relief to the patient in preventing collections of matter in the latter and facilitating their evacuation.

From this method of treatment to its still further improvement, as now proposed by Mr. Bowman, in the paper first referred to, only one step was wanting, viz. the dilatation of the stricture wherever situated in the course of the tear passages, taking advantage of the enlarged opening gained by the slitting up of the canaliculus. By referring to the anatomy of the tear passages, it will be found that their smallest diameter is at the punctum—the remainder of these passages, even including the canaliculus between the punctum and the sac, being sufficiently large to admit a probe one-twentieth of an inch in diameter; when once, therefore, the punctum is slit up, advantage may be taken of this opening to restore the passage to its natural calibre by the passing of graduated probes. As Mr. Bowman suggests, there is an analogy between the obstructions of the tear ducts and the urinary passages, and the method proposed by him for the relief of the former is similar to that in common use for the cure of the latter.

The probes used by Mr. Bowman vary in size from a fine hair probe (No. 1) to one of one-twentieth of an inch in diameter (No.

6). For convenience in use, three probes only are made, their two ends varying in diameter, so as to give the six sizes required. Each probe is uniform in size from its extremity, and not bulging at its end like ordinary probes. Nos. 1, 2, 3, and 4 are straight, and are intended to be used only in the canaliculus to dilate a stricture of this portion of the lachrymal passages, when such exists. Nos. 5 and 6 are adapted to dilatation of the lachrymal sac and duct. Their considerable size renders them less likely to penetrate the mucous membrane and produce false passages, than smaller probes. Their extremities are slightly curved in two different directions, while the central part (or that held by the finger and thumb) is straight. "The effect of this is that when the probe is inserted in the sac, and brought into a vertical position, a slight rotation of it on its long axis makes the lower point, which is in search of the orifice of the duct, describe a small circle, and by slightly varying the inclination of the probe, and making gentle pressure at the same time, with slight rotation, the point never fails to enter the duct. The right and left probes have opposite curves to suit the inclination of the duct."

Mr. Bowman afterward proposed a minute director (see Ophth. Hosp. Reports for Jan., 1858,) to facilitate the slitting up of the punctum and canaliculus. This director is made of steel, coated with gold by the electrotype process. "It is sufficiently thick in the stem to give it firmness, and one end is reduced to a very fine size, and grooved to within a line of the extremity, which is of the size of a No. 1 probe."

Before receiving a set of Mr. Bowman's probes from London, I had a series of four constructed, the smallest (No. 1) one-third of a French millimetre in diameter, and the largest, one millimetre and one-third. These answered very well; but the fine probes in Mr. Bowman's set are a valuable addition.*

Before proceeding to operate, it is generally easy to determine whether one or both canaliculi are pervious, by the reflux of the tears or pus toward the eye on pressure over the sac, or, if necessary, by the passage of probe No. 2, or No. 1. Where one canaliculus is impervious or strictured, Mr. Bowman advises to operate on the one that is patent, though in this case he slits up both puncta. Where we are at liberty to choose between the upper and lower lid, it is better to select the latter, which is more convenient for the operation, and for the subsequent passage of probes.

During the operation the patient is seated with the head supported against the chest of the surgeon or of an assistant. The surgeon accordingly stands behind the patient, or sits in front, to suit his convenience. Unless Mr. Bowman's director be used, I have found it convenient to introduce the point of a cataract knife in the punctum, and slit it up in the direction of the canaliculus, so as to enable me to introduce a No. 3 probe, and have a larger body as a guide in slitting up the canal. This is sometimes necessary also, even where Mr. B.'s director is used, to admit of its full introduction. The director should be employed when it is at hand, since it affords a better guide for the knife.

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* Geo. Tiemann & Co., surgical instrument makers, 63 Chatham St., N. Y., have now for sale the probes and director of Mr. Bowman, copied from a set which I imported from Mr. Weiss, of London.

In dividing, for instance, the canaliculus of the lower lid, the surgeon everts the punctum with the ring finger of one hand placed upon the skin over the lower edge of the orbit, in which position it can tighten or relax the canal by a sliding movement of the skin upon the bone. The probe or director is introduced into the canal with the opposite hand; then placed in charge of the index finger and thumb of the hand already upon the cheek, and by its being turned downward upon the malar bone, the canal is still further stretched, and the tissues to be divided, rendered tense. These tissues may now be slit up from the punctum as far as the caruncle, by means of a cataract, or any sharp-pointed, knife; and the director is finally raised on its point out of the canal, to make sure that they are all severed.

As soon as this operation is completed, the lachrymal passages may be at once explored with a full sized probe. In passing this through the remainder of the canaliculus, great delicacy of touch should be used, and no force applied, lest the mucous wall of the canal be injured, and obliteration follow. The probe should be made to feel its way, and the surgeon should guide it with care and dexterity, alternately stretching and relaxing the canal if any obstruction be met with. Strictures are most frequently found near the point where the canal terminates in the sac—less commonly about the middle of the canal. If such be met with, they are to be dilated by the repeated passage of the smaller probes, before the sac and duct are explored with the larger. In cases I have met with in which the canal was entirely obliterated near the sac, I have pushed on an exploring canula into the latter, and endeavored to establish an artificial opening by the frequent passage of probes, though I believe such attempts are generally unsuccessful.

The entrance of the point of the probe into the sac is easily recognized by its coming in contact with the inner bony wall, and the feeling that it has passed a contracted point as it enters, if a full sized probe be used, while before it enters, it is seen to stretch the lid toward the nose.

For a few days after the operation there is a tendency to union of the edges of the wound by first intention, and it is desirable to avoid this by separating them daily with a probe. But I usually defer exploration of the sac and duct during this period, waiting till the parts have become less sensitive by the subsidence of the slight inflammatory action which follows the operation.

It has already been stated that the large probes only are to be used for the dilatation of any stricture existing in the sac or duct, and the method of their employment has also been indicated. They are known to have penetrated into the nose by the feeling of the patient, and by the distance they have entered, which is ascertained by comparing the projecting portion with the length of one of the other probes of the set. If the difference between the two amounts to an inch and a half, the nasal cavity has been reached. I usually repeat the passage of the probes every second day at first, afterward twice a week, and finally at longer intervals. For the complete restoration of the passage, the treatment must usually be prolonged from several weeks to five or six months. Marked improvement, however, is generally attained in a short time, and the patient is able, by pressure downward, over the sac, to evacuate the fluids into the nose. Such are the chief points of this operative procedure, described by Mr. Bowman, and confirmed by the experience of others and my own.

In the New York Eye Infirmary the use of styles in the treatment of lachrymal obstructions was *entirely abandoned* five or six years ago. They fell into disuse for reasons which must be evident to any one who has seen much of their employment. They are very unsightly, especially in females; the discharge which their presence excites is offensive and requires to be frequently wiped away; they are liable to cause inflammation and abscess in the neighboring tissues or necrosis of the bones surrounding the duct; their removal for the purpose of cleansing is inconvenient, and their replacement often difficult; they sometimes bury themselves in the tissues and require an operation for their extraction, and the cases in which they effect a permanent cure after being worn for months are few compared with those in which they must be worn permanently.

General hygienic management and constitutional remedies have, for the most part, been the treatment at the Infirmary since the abandonment of styles. The chief constitutional remedies employed are iodide of potassium and bichloride of mercury. A knowledge of the marked benefit to be derived from the use of iodide of potassium in many cases of lachrymal obstruction was gained by accident. A boy, aged 10, applied at the Infirmary under the care of Dr. Du Bois, to be treated for mucocele. One of the cervical glands was observed to be enlarged. For the relief of this, iodide of potassium was prescribed; and under this treatment the affection of the tear passages rapidly improved and finally disappeared. The happy result in this case led to the employment of the iodide in others, which resulted in an equally favorable manner.

It is not claimed that the treatment of these cases by iodide of potassium and the bichloride is original at the Infirmary, for it is mentioned by Mackenzie and other authors on diseases of the eyes; but more importance is attached to it here than is generally attributed to it, though not more, it is believed, than it fully deserves. It is impossible to lay down rules applicable to all cases, which will enable us to determine which of the remedies mentioned should be employed. Where the disease is of syphilitic origin, the character of other existing constitutional symptoms—whether secondary or tertiary—may indicate whether mercurials or iodide of potassium should be preferred. But even where this origin of the disease is evident or suspected, all other constitutional symptoms may be absent, or both secondary and tertiary symptoms coëxist, and thus the above guide fail. A better indication, therefore, for the employment of remedies, is to be sought for in an examination of the tissues surrounding the passages which were first affected. Where the obstruction is due to chronic inflammation of the mucous membrane, mercurials should be preferred; the origin of the obstruction in the periosteum or bones, as shown by enlargement of these tissues, will indicate the iodide. This rule, however, cannot be considered as absolute. Iodide of potassium is the more frequently employed of the two at the Infirmary, especially in children.* Whichever is used, it must be continued perseveringly for months, and, in the meanwhile, the general hygienic management of the case not be neglected.

Since the appearance of Mr. Bowman's paper, I have tried the local treatment recommended by him in a dozen cases or more, some of which were seen at the Infirmary and others in private practice. The result of this trial has been very satisfactory, only one out of the number failing to be decidedly benefited or apparently cured; and I do not hesitate to say that Mr. Bowman's treatment is the best local treatment in our possession. Dr. Agnew, who has also made trial of this method, concurs with me in the expression of this opinion.

In most of the cases which we have treated by this method, all constitutional remedies have intentionally been avoided, in order better to test the efficacy of local treatment alone; but it is believed that more favorable results can be attained by combining the two. The two chief causes of chronic diseases of the lachrymal passages are a strumous diathesis and syphilis,* and while local treatment may relieve the disease for a time, it would be unreasonable to expect it to be wholly eradicated beyond danger of a relapse, unless the constitutional taint on which it depends be removed.

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* An infant, 4 months old, is now under my care at the Infirmary for obstruction of the tear passages, with reflux of purulent matter.

But let it not be supposed that we are undervaluing Mr. Bowman's treatment by these remarks. It holds as high a place as any local treatment can, in a disease dependent, in the majority of cases, on constitutional cachexia. Experience in its use by many competent observers has shown it to be a very great improvement on the old methods of practice. It will do much to shorten the duration of this troublesome disease, at the same time that we endeavor by constitutional remedies to remove the cause on which the disease depends; and in those not unfrequent cases, in which our attempts in the latter direction are fruitless, our patients may obtain comparative comfort, by the occasional passage of a probe passed through an opening concealed by the lid, in place of the disfigurement and liability to danger attendant upon the use of a style.

We observe that this treatment is still in use and is gaining in favor in London. The *Medical Times and Gazette*, Jan. 1, 1859, thus speaks of it: "The modern treatment of epiphora and obstructions of the lachrymal and nasal ducts is so simple and effectual that it must before long pass to a large extent from the hands of the specialist to those of the general practitioner. The clumsy and ineffectual style has been wholly superseded. The plan is to dilate the stricture. We do not think of making a patient with stricture of the urethra wear a catheter for the rest of his life; neither is the parallel measure needful in stricture of the nasal duct. The occasional passing of a bougie is all that is usually necessary."

Dr. v. Gräfe, of Berlin, "does not hesitate to pronounce Bowman's method the best of all used for the restoration of the lachrymal passages," though he states, what is undoubtedly true, "that cases of caries, organic obstructions, etc., occur, in which there is no prospect for restoration of the continuity, and in which the lachrymal sac should be obliterated," either by the actual cautery, or—as may be accomplished after first destroying the canaliculi, according to Tavignot's method—by the milder caustics. (see the *North American Medico-Chirurgical Review*, 1859, page 361). Dr. v. Gräfe gives as the result of his experience in destroying the sac, that "of one hundred patients in whom the lachrymal sac has been successfully destroyed, twenty suffer from permanent and troublesome overflowing of tears; seventy are molested neither at their work nor in the room, but experience increased moistening in the open air, or, if excited to tears, etc.; ten finally do not notice any difference from the normal eye."

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* Mr. Jonathan Hutchinson has recently written an essay, entitled: "On the different forms of Inflammation of the Eye consequent on inherited Syphilis," in which he endeavors to show that "certain cases of tinea tarsi, fistula lachrymalis, and other affections of the ocular appendages occurring in children are of syphilitic origin." (See the Ophth. Hosp. Reports for July, 1858, et seq.) See also a work by M. Lagneau fils, on "Maladies syphilitiques consécutives des voies lacrymales." Paris, 1859.

The limits of this paper do not allow of the consideration of other local methods of treatment in obstructions of the tear passages; all of them, however, are thought to be much inferior to those now mentioned. It is believed that injections by means of Anel's syringe are often palliative, though seldom curative; and the passage of Anel's probes aims at the same effect as Bowman's method, with a very small chance of attaining it in comparison with the latter; it may be compared to an attempt to permanently dilate a stricture of the urethra with a No. 1 bougie.

274 Sixth Avenue.

ART III.—*Transactions of the Medical Society of the County of Kings. For October, November, and December*, 1858. Reported by a Committee of Publication.

OCTOBER.—*Large encysted tumor removed from the anterior region of the neck.*—Dr. C. E. ISAACS presented to the society a specimen of a large encysted tumor, which he had recently removed from the anterior region of the neck. After giving a description of the anatomy of this region, illustrated by injected specimens, plates, and diagrams, he proceeded to read the following paper:

I was consulted lately by an unmarried woman, at twenty-five, on account of a tumor situated in the anterior region of the neck. On examination, I found it to be about the size of a goose egg, extending vertically from the upper margin of the thyroid cartilage to the top of the sternum, and laterally about an inch to the right, and two inches to the left, of the median line. On superficial observation, it much resembled goitre, but on closer inspection, it was evidently a large cyst, containing a fluid, and bound down strongly by the parts, which lay over it, but yet possessing a distinct mobility. She informed me that she had first perceived a small tumor, about three years ago, and that since that time it had slowly but steadily increased. A few weeks previously to her consulting me, she had been to a surgeon, who punctured the cyst, and discharged several ounces of a watery, chocolate-colored fluid, apparently mixed with coffee grounds. After this, the tumor increased rapidly. She then consulted another surgeon, who made a small incision into it, drew off the fluid, and applied caustic (nitrate of silver?) to its interior. This application was also followed by a rapid enlargement of the tumor. As this produced considerable pressure upon the larynx, trachea, and great vessels of the neck, she suffered much from frequent headaches, and occasionally difficult or embarrassed respiration. I explained to her that two methods might be adopted—one which in all probability would merely be palliative, although sometimes successful; the other was the entire removal of the cyst, which would be attended with much difficulty and danger. She expressed her readiness to submit to any plan which I might determine to be the best.

Accordingly, on the 7th August, the patient having been placed under the influence of a mixture of chloroform and ether, I proceeded to operate. I was very kindly and ably assisted by Drs. Bell and Kissam, surgeons of the Brooklyn City Hospital, and by Drs. Cunningham and Tinsley, house-surgeons of that institution. I determined to expose the cyst fairly by an incision, and then either simply puncture it, and draw off the fluid, and inject with the tincture of iodine, perhaps also removing a portion of the cyst at the same time; or if this plan should not seem to be expedient, then to make an attempt to extirpate it, if this should appear to be practicable—in a word, to be guided in the choice of the operation by the condition of the parts when fairly exposed. Accordingly, I made a vertical incision, about an inch and a half in length, through the integuments covering the tumor, and about an inch to the left of the median line. The integuments, platysma, sterno-hyoid, sterno-thyroid, sterno-mastoid, and deep cervical fascia, which were spread over the surface of the tumor, and strongly bound it down, were carefully divided. By then separating these parts carefully from the tumor, and drawing them to each side, I exposed fairly the naked and polished surface of the cyst. It was then ascertained, that by following closely the surface of the tumor, and by using the handle of the scalpel and the points of the fingers, aided by occasional touches with the knife, that the anterior and lateral portions of the tumor could be enucleated.

I could also pass my finger around the sides of the tumor, and reach its posterior surface, and was thus enabled to form such an opinion of its nature and connections as determined me to proceed with the operation, with a view to its complete removal, if practicable. Accordingly, I now enlarged the external incision upward as far as the superior margin of the thyroid cartilage, and downward to the top of the sternum. It was now perceived that the posterior surface of the tumor reposed upon the carotid artery and jugular vein, and was adherent to the pharynx, œsophagus, larynx, and trachea. The lower end of the tumor could be traced with the finger, behind, and apparently nearly an inch below, the top of the sternum.

The arteries supplying the tumor were inconsiderable, but the veins returning its blood were numerous, and some of them of large size passed into the internal jugular. Those from the lower part of the tumor apparently entered the great transverse vein. As the greatest danger was to be apprehended from the division of these veins, not only from hemorrhage, and the difficulty of securing them afterward, but more especially from the entrance of air, *I cautiously insulated each vessel, and applied ligatures before dividing it.* The finger was now passed underneath the lower end of the tumor, which was lifted up out of its bed, behind the upper portion of the first bone of the sternum, the pleura being on each side of the tumor, as could easily be seen by the rising and falling of the apex of each lung during the acts of respiration. The deep-seated veins which returned the blood of this lower portion of the tumor, were carefully ligatured before division, and then its remaining attachments to the large vessels, œsophagus, larynx, etc., were cautiously separated. Much care was necessary to avoid injuring the recurrent laryngeal nerve, which adhered to the side of the tumor. On now examining the deep cavity of the wound, the carotid and internal jugular were exposed to the extent of nearly three inches. *The finger could be passed behind the upper portion of the sternum so as to feel distinctly the transverse portion of the arch of the aorta, and the origin of the arteria innominata, and of the left carotid; also the trachea, where it lies in the angle formed by the divergence of these two great arteries, at their origin, from the aorta.* The hemorrhage, during the operation, was inconsiderable, amounting perhaps to five or eight ounces. The wound was closed by interrupted sutures and a few adhesive strips. For three days afterward the pulse ranged from 120 to 140, skin hot, tongue furred, great thirst, severe headache, paroxysmal difficulty of breathing, and especially of swallowing, pain in the back and limbs, etc. The voice was reduced to a mere whisper. On the fourth day, all the symptoms were much more favorable, and from that time the patient continued to improve. At the conclusion of the operation, it was ascertained that the tumor or cyst which had been removed had no connection with the thyroid gland. On laying open this cyst, it was found to be of the consistence and thickness of ordinary buckskin, and composed of fibro-cellular tissue. Incorporated into its substance were two lymphatic glands, about the size of a small almond. The interior of the cyst was rather rough, possessed no epithelium, and resembled somewhat the interior of the left ventricle of the heart—having a partially columnated appearance. It contained a layer of old and organized fibrin.

From the structure and thickness of the cyst, it was, I think, sufficiently evident that nothing short of complete extirpation would have effected a radical cure. The fluid it contained was of a dark brownish red color, and contained many small black clots of blood. Examined under the microscope, it exhibited myriads of imperfect and numerous rounded cells, of various size, with large nuclei.

It is now two months since the operation was performed. The wound has entirely healed, and the patient is perfectly well with the exception of some slight hoarseness, which however is gradually diminishing, and after a few months will probably be completely removed.* I attribute this condition of the voice to the fact, that the recurrent laryngeal nerve had been put greatly upon the stretch by the tumor, to which it closely adhered, and to its detachment, and consequent inevitable relaxation of its fibres, and novel situation, at the time of and subsequent to the operation.

I may here mention, that I had the satisfaction of showing the patient, after her recovery, to Dr. Mitchell, President of the Kings County Medical Society, Dr. Mason, Smith, and several other physicians.

NOVEMBER.—*Dislocation of the ulna upon the humerus, without dislocation or injury of the radius.*—DR. ISAACS reported the following interesting case of dislocation: The patient was a boy thirteen years of age. The coronoid process was thrown backward, into the posterior sigmoid fossa of the humerus, while the olecranon process projected backward and upward. The forearm and hand were twisted inward. On the posterior and lower part of the arm was a deep depression, into which the hand could be sunk; although there was evidently great deformity about the joint, the swelling was moderate in extent. Chloroform was administered. Liston and Cooper's plans of reduction were both unsuccessfully tried. The arm was then firmly fixed by an assistant, the left hand of the operator was strongly applied against the forearm, at the elbow, in order to press the coronoid process backward, and outward. The forearm being now suddenly flexed, the dislocation was instantly reduced.

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* I have just learnt (April 8th, 1859) from the relatives of the patient, that she is quite well—the voice is now perfectly natural.

Dislocation of the first phalanx of the fore-finger, upward upon the metacarpal bone.—Dr. Isaacs reported the following case: The patient was a boy about twelve years of age. Unsuccessful efforts had been made for its reduction. He placed the boy under the influence of chloroform, extension and counter-extension were used, while an effort was made to flex the joint. This proving unsuccessful, he grasped the affected hand with his left, so as to make firm counter-extension, then seized the finger with his right hand, and extended it strongly, at the same time pressing with the thumb firmly upon the head of the dislocated phalanx; while making pressure, the finger was suddenly flexed, and the bone was instantly reduced.

Whooping cough in adults.—Dr. Mitchell reported the occurrence of whooping cough in adults, of whom an unusual number were affected, and in some instances for the second time.

In two of these cases the cough was of great severity, and in no degree alleviated by ordinary remedies. Tartar emetic, lobelia, prussic acid, opiates, belladonna, etc., with counter-irritation, were liberally used.

In one of these, a lady thirty years of age, the coughing fit was followed with such spasm of the muscles of the larynx as to threaten suffocation, and gave rise to some uneasiness as to the result. These spasms were entirely different from the whoop, during the paroxysm.

Both these patients were directed to drink an ounce of strong coffee without milk, every two hours, and within twenty-four hours the symptoms were so far relieved as to render further medical attendance unnecessary.

Peculiar cerebral symptoms depending upon excessive sexual indulgence.—Dr. Isaacs also related the following case: A man, of naturally strong and muscular frame, and good constitution, came to consult him, stating that he had always been perfectly healthy, up to the 1st of January, 1858, when he married. He seemed to have been under the impression, that his only duty was to give himself up to sexual intercourse, and he accordingly indulged in excessive venery, to an almost incredible extent. At the end of two months he became exhausted, and among other difficulties became, to a considerable degree, amaurotic. He was under the charge of some of the most talented and experienced oculists in New York, for three months, without deriving (as he said) the slightest benefit. He had been cupped, leeched, blistered, and had taken mercurials, iodide of potassium, quinine, iron, and indeed almost everything that can be used in such cases, yet he remained the same. Dr. Isaacs introduced a thread seton in each temple, and administered nux vomica; afterward a blister was applied to the back of the neck. His general health seemed improved, but his eye-sight was not benefited. It was ascertained that one eye had become long sighted, and the other short sighted; the reading distance of one being four feet, and that of the other but one foot. He had flashes of light before the eyes, and was troubled with dark spots floating in his vision. The button cautery was applied—the instrument being made of the small, *new* United States cent, or penny, attached by an iron stem to a wooden handle. The cent was heated in a spirit-lamp, and rapidly and lightly applied upon the back of the neck, in perhaps twenty places, passing from above downward. It had the effect of reddening and blistering the skin at the point of contact, but did not char it in the manner of the actual cautery. *It is a curious fact, that for five minutes after the application of the iron, he informed me that he saw everything as clearly and distinctly as he ever did in his life*; but this effect was transitory. He was now put upon a solution of strychnine, in phosphoric acid, of the strength of one grain to the ounce of acid—ten drops, ter in die, gradually increased. Under the influence of these remedies, the focal distances of the eye are changing—the reading distance of the long-sighted eye becoming shorter, and that of the short-sighted eye becoming longer, and thus approaching toward the same focal distance. The muscæ volitantes are diminishing and the general health is considerably improved. He has given up sexual intercourse entirely. There is no evidence of seminal loss, and no tenderness or irritability of the urethra, bladder, or prostate, is revealed by symptoms, or on the introduction of a catheter. In the discussion, Dr. Marvin remarked that he had found strychnine dissolved in phosphoric acid, to be a powerful tonic, and thinks it the best medicine in cases like that just stated. He had used it with benefit where there was a local want of nervous power, as in cases of atonic dyspepsia. On examining a solution of strychnine in phosphoric acid, he found that the whole of the strychnine was not dissolved, and on stating this objection to the apothecary, Mr. Davies, suggested the use of the acetate of strychnine in phosphoric acid, as being more soluble. Dr. Marvin thinks this a better preparation, as more strychnine is present in the same dose.

In cases of spermatorrhea, Dr. Landon had applied the diluted citrine ointment to the urethra, by means of a sound, with utility.

Dr. Mitchell suggested ergot as a most useful remedy in such cases. He gives three grains of ergotine every three to six hours, in form of pill.

Dr. Isaacs has used a mixture of tincture ergot and tincture of lupuline, equal parts; dose, a teaspoonful three or four times a day. In some cases of a scrofulous constitution, he has found the nitrate of silver either useless or injurious. He then applies instead, the citrine or blue mercurial ointment, calomel ointment, solutions of acetate of zinc, or sulphate of copper. Some cases obstinately resist all the usual remedies, and are then found to depend upon ascarides in the rectum.

Hemorrhages—Treatment by styptics.—Dr. Cook had met with some cases of intestinal and other hemorrhages, in which he had used most successfully a styptic, recommended by Dr. Warren of New York. It consists of

Sulphuric acid, ...	ʒv.
Spirits of turpentine, ...	℥ii.
Alcohol, ...	ʒii.

The turpentine is slowly mixed with acid, the alcohol is then added, and the mixture put into a glass-stoppered vial. When the fumes cease to rise, the stopper is put in, and the mixture is ready for use—dose, forty drops. This is rubbed up with sugar and then mixed with a teacup of water, and administered. A second dose may be given one hour after the first, and a third two hours after the second. Dr. Cook has used this remedy in almost every variety of hemorrhage. He has not found it to fail in a single instance of hemoptysis, or of uterine hemorrhage. In one case of severe bleeding from the lungs the hemorrhage was stopped almost instantly after the first dose.

Jaundice—Treatment.—Dr. Cook also stated, that he had seen a number of cases of jaundice, and thinks it prevalent. In reply to a question as to treatment, he said that he was accustomed to commence with an emetic, and followed it up with blue pill, and then put the patient upon the use of tincture of sanguinaria.

Dr. Marvin considered the blue pill as of very great utility in such cases.

Dr. Isaacs had often used it with benefit, applying cups, or leeches, and sometimes sinapisms or blister, over the epigastric region, when tenderness existed there. He once had an opportunity of seeing an endemic of jaundice, on a large scale, when he was in the United States army. The government removed the Cherokee Indians from the States of North Carolina and Georgia to Tennessee. They were taken from a mountainous country and free-stone water, where they were living on game and whatever they could cultivate, down into the valleys of the Tennessee, where the water was limestone. and they were placed upon government rations. In a few weeks nearly all became more or less affected by jaundice—hundreds at a time. In many the yellowness was as deep as that of an orange. He does not think that the treatment had any influence whatever; the disease seemed to run a regular course, terminating in from three to six weeks. They generally complained of heaviness, drowsiness, headache, and want of appetite. In some of the worst cases the appetite was as good as ever—and in one prominent case, in which it was constantly indulged to excess, the patient recovered like the rest—no deaths occurred. In this endemic the whites were not affected—hard eggs had been lately recommended.

Dr. Mitchell stated that he had known lemon juice to act favorably after the early stage of the disease.

Irritability of bladder in pregnancy.—Dr. Mitchell related an instance of distressing irritability of the bladder, during pregnancy, confining the patient to her bed and interrupting her sleep. Prompt and permanent relief was procured by the administration of tincture of belladonna.

Hemorrhoids—Treatment.—Dr. Mitchell also referred to a case of hemorrhoide that had for two years resisted every variety of treatment, finally exhausting the patient by their bleeding, and greatly restricting her necessary exercise, and seriously undermining her health. By the use of pills of pitch she was completely relieved.

December.—*Pruritus vaginæ—Its causes and treatment.*—The subject of pruritus vaginæ was introduced by Dr. Bell, for the purpose of eliciting experience on the local application of chlorate of potash in that disease, he having lately prescribed this remedy with benefit. The general expression of opinion concurred in the belief that pruritus vaginæ depends upon functional derangements of the uterus, or congestion of the os and cervix uteri, and most likely to occur during pregnancy. The local applications named as of most benefit, particularly in cases of pregnancy, when constitutional treatment is restricted, are glycerine, solutions of tannin, two scruples to the ounce, cyanuret of potassium, half a drachm to half a pint of water, and solutions of prussic acid. An obstinate case in a pregnant woman was relieved by the application of elder-flower ointment, mixed with trisnitrate of bismuth. Ice-cold water is a common and often an effectual means of alleviation. Solutions of nitrate of silver, sometimes as high as forty grains to the ounce, have been applied to the affected parts with decided efficacy. Some cases are caused by ascarides, when treatment should be directed accordingly. An enema, composed of equal parts of quassia and wormwood, has been found effectual in removing these worms; but in one extremely obstinate case, reported by Dr. Isaacs, where the simple infusion failed, the addition of common salt and tincture of camphor was attended with perfect success.

Case of albuminuria with unusual symptoms.—Dr. Landon reported a case of albuminuria, accompanied with, or declared by unusual symptoms, sick headache of great severity, occurring at intervals of from six to ten days; excessive prostration and slow pulse—only forty-eight. The patient has much improved on constitutional treatment, calomel and tincture of bark, and the application of cut cups, over the region of the kidneys. The headaches are less severe, and the interval between the attacks longer. The quantity of albumen in the urine is also decreasing. The opinion was elicited, that in this case the headaches indicated threatened effusion.

Prevailing diseases.—Severe cases of "sore throat" were reported, without other morbid tendency. The aspect of these cases is: dusky red color, enlarged tonsils, covered with white exudations easily removed—extreme painfulness of the part, and but little constitutional disturbance. One case, however, has been accompanied by delirium at night, and total inability to swallow. Influenza with sore throat is prevalent and increasing. In most cases there is considerable fever, and in some, delirium at night. Scarlatina is also prevalent, and believed to be increasing. One fatal case reported by Dr. Dudley lived five days after suppression of urine.

Dr. Marvin referred to a case which occurred several years ago, where the patient lived longer than five days after total suppression of urine, but who just before death passed a small quantity of black urine.

Dr. Mason reported a case of recovery after suppression of urine for an uncertain length of time, consequent upon scarlatina. The child being convalescent, was suddenly seized with convulsions. Treatment by strong counter-irritating liniments, containing turpentine, applied over region of the kidneys, mercurial purgatives, nitre and digitalis. After twelve hours *black* urine was passed. The secretion became gradually lighter, and the patient recovered. Six cases of erysipelas were reported.

Pneumonia of an intermittent type, the exacerbation coming on about midnight, and the fever running so high as to occasion delirium, has been noticed by several members, but Dr. Mitchell, in particular, has had a number of cases, and requests particular attention to this type of disease.

There were reported five cases of erysipelas, six of chicken pox, one of varioloid, and seven of scarlatina. Phthisis is deemed to be unusually prevalent.

Hepatic derangement with neuralgia, is unusually common in all diseases. In the treatment of the diseases reported, the benefit of quinine in erysipelas was particularly dwelt upon. Neuralgia was stated to be a common symptom of hepatic derangement, and therefore more effectually treated when remedies were directed to the functions of the liver.

Case of diphtheria affecting the faucial, palatial and nasal mucous surfaces, with peculiar derangement of nervous functions—By James Crane, M.D.—Mr. T——, aged 17 years, resident in Washington Avenue, returned from a visit in the city of New York, on the evening of the 10th of March, 1854, in his accustomed good health. On the 11th, he was attacked with chill, followed by pain in the head, back and extremities, by general malaise, and the usual prodromata of influenza, which was a prevalent disease at that time. I was called to visit him on Monday the 13th of March. There had been no reactive fever since the chill. The countenance was pale; tongue slightly coated; the voice thick, and its utterance indistinct. The glands and cellular tissue of the neck on the right side were much swollen. Swallowing was difficult and painful. Pulse 90, and surface cool. Upon inspection, the faucial mucous membrane was congested. The tonsils were slightly enlarged, with ashy fawn colored deposit upon their surfaces. Directed ol. ricini ℥ss., to be taken at once.

℞ Nitratis argenti (crystals) gr. xl.
Aquæ distillatæ, ℥j.
Fiat solutio. To be applied over fauces and tonsils.
℞ acetum, 1 pint.
Infusionis salviæ officinalis, 2 parts.
Fiat gargarisma. Frequently.
Tinct. iodini, externally.

14th.—The general condition of the patient remains the same. The bowels had been freely evacuated. The external swelling of the glands continues unchanged. The diphtheritic deposit upon the tonsils is now complete, and is extending to the surrounding parts. Deglutition is difficult, and the voice very indistinct. Continue the gargle and sol. nit. argt. to fauces, and tinct. iodine externally.

15th.—The fauces are covered with false membrane. The external swelling is decreasing. The general symptoms are the same. Same treatment continued. Beef-tea is ordered for nourishment.

20th.—Since the last date, the external swelling of glands has subsided. The diphtheritic deposit has extended over the entire fauces, the uvula, which is from 1½ to 2 inches in length, and forward over the palatial arch to the extent of *one* inch. Deglutition is still very difficult, and the voice very indistinct. The tongue is clean; face pale; pulse 90, and feeble. Directed wine-whey and beef-tea for nourishment. As the sol. of nit. argt. did not in the least modify the condition of things, its use was now suspended.

25th.—There has been no further extension of disease over the mucous membrane of the palate. The posterior fauces are free from deposit of membrane. The membrane upon the palatial arch is loose and detaching *itself*; a portion, an inch square, was easily removed, of the thickness and appearance of ordinary buckskin, firm and not easily torn. The surface beneath presented a congested appearance, studded with numerous dotted, bloody points, showing an effort at organization of the membrane. Other symptoms remain the same. Directed a generous diet. Beef, eggs, oysters, ale, etc., etc.

March 31st.—Yesterday vision was unimpaired. This morning he is unable to read his newspaper as usual. He sees objects at a distance distinctly; with glasses belonging to his grandmother (a lady about 70 years of age), he reads with ease and comfort. The voice is still indistinct, and very like that of a person having a cleft palate. Deglutition is difficult, and unless it is performed slowly and cautiously, liquids are rejected through the nostrils. Tongue clean; appetite good. Bowels regular, and secretions healthy. The patient is steadily losing in flesh and strength. The glands on the right side of the neck are again swollen and enlarged. Directed quiniæ sulphatis gr. ij. every six hours, with generous diet. Also tinct. iodini externally.

April 1st.—Upon inspection of the mouth and fauces no trace of membrane is to be found. The patient is blowing fragments of false membrane occasionally from the nostrils. Upon examination, it is found within the nostrils, and extending over the mucous surface to its juncture with the true skin. The patient is this morning affected with presbyopia.

April 10th.—No trace of false membrane is to be discovered. The fauces are natural in appearance. The external swellings of the glands has subsided. Deglutition remains the same, and the voice unimproved. A dry, unproductive and troublesome cough has supervened. Presbyopia still continues with emaciation and loss of strength.

April 22d.--Presbyopia ceased as suddenly as it supervened. This morning vision is perfect. Deglutition and voice unimproved. Debility and emaciation increasing. Cough continues. A careful exploration of the chest reveals no signs of disease. The evidence of defective innervation is still accumulating. The powers of locomotion are now impaired. Patient's limbs totter beneath him, and his gait is reeling and unsteady. Ordered generous diet, wine, ale and passive exercise in the open air. Suggested also a change of climate.

May 3d.—The patient was visited by Dr. Buck, of New York. The throat and chest were carefully examined, but no disease was discovered in these regions. Iodid. potassii was ordered internally in connection with daily inhalation of the fumes of cinnabar. These remedies were continued until the 10th of May without benefit to the patient, when he left by steamer for Richmond, Va. Mr. T—— returned from the South, after an absence of six weeks, improved in all respects. After a summer spent in rĕcreation among the mountains of Pennsylvania, his health was fully reëstablished.

In reviewing this case some points of interest present themselves:

1st. The fortunate extension of this disease, in its local development, upward into the faucial, palatial and nasal mucous surfaces. Had the larynx been implicated, the danger would have been vastly increased, the chances of recovery resting upon the doubtful results of an operation.

2d. From observation in this case, the period at which false membrane would seem to detach itself, is on the fifth day.

3d. The peculiar lesions of the nervous centres manifested themselves in the disordered functions of innervation and nutrition. Of these, the most singular and unaccountable was the sudden impairment of vision, commencing April 1st, three weeks after the invasion of the disease, and ceasing on the 22d as suddenly as it supervened.

We deduce the following propositions:

1st. Diphtheria is a specific essential disease per se.

2d. It is asthenic in type, presenting no tendency to reaction from its onset to its termination.

3d. Its primary devolopment is upon the mucous membranes.

4th. Its secondary effects are principally manifested in perverted and disordered special and general nervous functions.

5th. As to its remote or proximate causes and true pathology we are yet in ignorance.

Art. IV.—*On Auscultation of the Voice.* By J. Herzka, M.D.

The voice is physiologically the effect of an expiratory act. Acoustically it is the result of a shock which the condensated expiratory air receives at the rima glottidis.

The expiration for the utterance of a vocal sound differs, nevertheless, from the expiration of the purely respiratory purpose. The former is primarily a voluntary act of the expiratory muscles; the latter is initiated by the involuntary contraction of the air-cells. In the former, the contraction of the air-cells follows the muscular compression of the thorax; in the latter, the muscular coarctation of the thorax takes place consequent upon and forced by the primary contraction of the air-cells. In the former, there is no opportunity given for the formation of a vacuum within the thorax; in the latter, on the contrary, the same chances exist as during inspiration. During inspiration, the thorax is widened through muscular action, a vacuum is thus formed between the expanded limits of the thorax and the lungs, in consequence of which these are inflated to the extent of the vacuum. During expiration the same takes place in an inverse order. The lungs collapse through the contractility of the air-cells, then again a vacuum is formed between the retracted lungs and the still expanded thorax, so that the latter is forced by muscular action to follow the retraction of the lungs.*

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* This analysis of the mechanism of the respiratory acts, fully discloses the fallacy of that still ruling opinion, that normal respiration influences the circulation in so far as at inspiration, through the vacuum formed in the thoracic cavity, the centripetal current is accelerated, and the centrifugal current retarded, and that at expiration through the compression of the thoracic cavity the arterial circulation is accelerated, and the venous circulation retarded. It was shown that during normal respiration a vacuum is formed in the thoracic cavity at expiration as well as at inspiration, and that consequently there is no room for the difference of effect on the circulation on that account. If the thorax pumps the blood from the blood-vessels into the heart during inspiration, it must do the same during expiration. Only when after completed normal expiration we still continue forcibly to compress the thorax, or if under the influence of pain, we breathe with a certain force, to give utterance to the sensation of pain, or if the contractility of the air-cells is diminished to a degree, that to satisfy the natural want of expiration, we compress the thorax, to make up the deficiency in the contractility of the air-cells, then certainly will the effect of such expiration on the circulation be such as the physiologists claim for it in general, *i. e.* acceleration of the arterial and retardation of the venous current.

The same takes takes place *sub nisu*, that is, if after an inspiration we close the glottis, making at the same time expiratory efforts by compression of the thorax. It is well known that this modus operandi is the only way in which we can at will diminish the arterial pulse and the stroke of the heart, as every one can try for himself. The cause of such influence on the pulse is, that the pressure of the thorax prevents the venous blood from being discharged into the right ventricle, whereby the supply of the left ventricle by degrees is cut off, the heart is compressed, nothing can come in to expand it, and consequently there can be no systole. This fact is further historically remarkable, as its discoverer, the very celebrated

If in one breath, that is after one inspiration, we utter a series of vocal sounds by speaking a whole sentence, we make a gradual expiration. *i. e.* a gradual compression of the lungs through the action of the expiratory muscles till the compression reaches a certain degree, when a fresh supply of air is drawn in by a renewed inspiration. In regard to such gradual action, another difference is to be noticed between the two kinds of expiration. In respiratory expiration, where the initiative is with the air-cells, which give away to their contractility, the whole mass of such cells must act contemporaneously and in harmony. They all must do the same thing at the same time, as they follow the same inciting cause. The action pervades the whole of the lungs at once, and it is made gradual only in so far, as each and all of the cells contract gradually. Not so in vocal expiration, where the cells are more passive, subject to muscular compression, and those cells which are most exposed to the muscular action are the first to be compressed, to be then followed by others next in order to be brought under muscular action, and the expiration is gradual in so far as one part of the lungs follows the other in being compressed. During respiratory expiration all the cells are to be met at every stage in the same phase of contraction, and there can be no difference between the upper and the lower, between the anterior and posterior, and between the peripheric and central parts of the lungs. On the contrary, during vocal expiration one portion of the air-cells may be yet fully expanded when another is already compressed to a certain degree, and the more peripheric parts must precede the central ones, the inferior part, placed beneath the most movable section of the thorax, will come sooner under the action of the expiratory muscles than the superior lobe, and the anterior part will hold the same relation to the interscapular portion. Thus, if after one inspiration a series of vocal sounds are uttered, each of them will in fact issue from a different part of the lungs.

A further difference between respiratory and vocal expiration results in the following manner: the right lung is larger and broader than the left one. In respiratory expiration, where the propelling power for the air is in the contractility of the air-cells, the velocity with which the air escapes from the lungs is the same for the right and the left alæ. For if the

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physiologist of Leipsig, Ernst Heinrich Weber, nearly fell a victim in experimenting upon himself on the subject. He became palsied, and it was with some difficulty that he was rescued.

In disregarding this distinction between physiological and pathological expiration, have the physiologists been misled to false conclusions from their manometrical experiments, which are connected with vivisections where the animal breathes most unphysiologically, and can therefore offer no proof for normal respiration.

right ala contains so much more air as it is made up of so many more air-cells, it possesses of necessity so much more propelling power, so that the mass set in motion is increased in the same ratio with the moving force, leaving thus the velocity unchanged. But in vocal expiration the propelling power is mainly with the expiratory muscles which power is alike for the right and left half of the thorax, so that the muscles on the right side, without more force than on the left, have to act on a broader expanse of air-cells, that is, on a larger bulk of air, and must therefore propel the same with less velocity. The current of air in vocal expiration must consequently be more rapid in the left lung than in the right one.

Ultimately, if a certain amount of muscular compression of the thorax is required for the utterance of a vocal sound, there is a margin left for differences in the rapidity of this expiratory current. Not all persons will use the same degree of pressure combined with the same suddenness for the production of vocal sounds. Not all persons speak with the same expenditure of muscular strength, which will correspond in a certain measure with the particularities of the mind, and the frame, and perhaps even of habit. So that the expiratory current in vocal expiration will be more rapid in some persons than in others, when the expiratory current of the respiratory expiration might not exhibit any difference of rapidity.

I have dwelt upon these preliminary remarks—which may at first sight be considered as mere niceties—because they contain the elements for the settlement of several points on which Skoda has bestowed but a passing notice. He says in his "Treatise on Percussion and Auscultation," 5th edition, page 43: "In the normal condition of the lungs one hears over the thorax of some persons, no voice, but only a murmur, which is strongest between the scapula and the vertebral column, less strong under the clavicle, and which vanishes by degrees at the lower parts of the thorax. In some persons, though with a deep voice, the same is in the normal condition of the lungs, strong and moderately clear between the scapula and the spinal column—very seldom with a distinct articulation—in some persons with a high voice, it is weak and clear.

"Less strong and clear than between the scapula and the spinal column, the voice appears in the normal condition of the lungs of some persons below the clavicle, and still weaker and duller in the arm-pits. The strong and clear voice appears not seldom in the normal condition of the lungs, only on the right side in the heretofore mentioned localities, while on the left side but a murmur is to be heard. On the left side alone the strong and clear voice is never to be met with in the normal condition of the lungs. Over the rest of the circumference of the thorax one hears in the normal condition of the lungs in all persons, no voice, but merely a murmur, or nothing at all."

The facts brought here to notice by Skoda, in a somewhat promiscuous manner, can be enumerated as follows:

1st. In the normal condition of the lungs, we hear on all persons over the whole thorax, with the exception of the interscapular, subclavicular and axillar space, merely a murmur or nothing at all.

2d. In the normal condition of the lungs, this murmur is generally heard stronger in the axilla, still stronger in the subclavicular, and strongest in the interscapular space.

3d. In the normal condition of the lungs, we hear sometimes in these three localities, with the same gradation, a more or less strong and clear voice, which is stronger in persons with a deep voice, less strong in persons with a high key.

4th. In the normal condition of the lungs, this strong and clear voice of these three localities is sometimes to be met with only on one side of the thorax, and in that case always on the right side, never on the left side alone.

Wintrich dwells upon the same facts with still more particularity. He says ("Krankheiten der Respirations Organe," p. 129): "The heretofore-mentioned murmur over the regions of the thorax, where the vesiculous, air-containing, healthy parenchyma of the lungs lies, is, as generally well known, not alike strong in all places, or in all persons, or in every key of the voice. And sometimes it is not to be heard at all.

"Between this just mentioned unarticulated murmur, and the intensity of the comparatively still very distinct articulation of the laryngophony and tracheophony, there are in several places over the thorax of healthy persons intermediate degrees, which the authors have designated by bronchophony.

"This bronchophony is still more indistinctly articulated than the laryngophony and tracheophony, and has also less intensity than the latter, till it passes over by degrees to a mere murmur and ultimately vanishes entirely.

"This gradation from plus to minus keeps within the following order of the different regions: the side regions of the neck. the five lowest cervical, and the four uppermost dorsal vertebræ. the interscapular space along side of the vertebral column in its superior half (on the right side, mostly without an exception, stronger than on the left), the regio supraspinata, the region below the clavicles to the extent of several centimetres downward, more toward the sternum (again mostly stronger on the right side than on the left). In all other parts of the chest the voice changes to a mere murmur or vanishes entirely.

"I have found that in persons with a high key the here mentioned bronchophony is more seldom and less strong than in those with a deep key, but that in the former it is more distinctly articulated.

"The murmur keeps within the same order of gradation of intensity in regard to the different regions of the chest like the bronchophony, but it is generally heard over the whole thorax where the healthy lung underlies, at least in persons with a deep voice. It appears weakest, though, toward the inferior border of the lungs, and there again weaker posteriorly than in front. If a person speaks in a high key even the murmur disappears in the majority of cases in the lower regions of the chest, at least posteriorly; still, not always so."

Here, then, we find what seems to be a capricious versatility in the closest proximity with an unbending consistency. But both come within the province of nature, and where there is nature, there is nature's law, and where there is law there must be a principle. And what is the principle upon which the above enumerated facts are founded? Which is the law of natural philosophy to explain them? Why do we hear the voice over the thorax, once not at all, once as a weak murmur, once as a strong murmur, here as a weak but distinct voice, here again as a stronger but less distinct voice? Why do we hear it in one person different in strength, and distinctness from another? Why do we hear it sometimes on both sides of the thorax alike, at other times different in intensity on the one side from the other? So much for what seems to be capricious versatility. On the other hand, why is there always that strict regularity, that if a difference in the strength of the auscultatory voice exists between different regions of the thorax, it is always in favor of the upper region compared with the lower, and of the posterior part compared with the front? Why the same favor for the voice in a deep key compared with the high voice? And ultimately, why that rule without an exception, by which the voice is heard stronger on the right than on the left side, wherever there is a difference between the two sides in the healthy condition of the lungs?

Skoda stops at the mere record of these singular facts. Wintrich winds up by saying (loc. cit.), "from the previous explanations the reader will not find it difficult to discover the cause of such a state of things;"—but, when in the following passage he goes on to point out in particular that cause, which he confidently hopes the reader will discover without difficulty, we find that he confines his endeavors to an explanation, why the voice is heard less strong and clear over the lungs than over the larynx and trachea, leaving all the auscultatory differences between different regions of the thorax, between different persons and between different keys of the voice as well as between the right and left half of the thorax entirely untouched.

I have said above, that the preliminary remarks of this communication pointing out some differential features of the vocal expiration compared with the respiratory expiration. will help to answer these questions, which Skoda and Wintrich have left unanswered; but before I go on in that direction, I must state that there are two more questions awaiting with those just quoted, that a cause founded upon sound principles of natural philosophy should be allotted them. The first of these two questions arises from the well known fact that—to use the words of Skoda (loc. cit.)—"In the abnormal condition of the respiratory organs there is no spot on the whole of the thorax, where the voice could not be heard strong and clear." What, then, is the physical cause of such difference between healthy and diseased lungs?

The last and the most striking of these two questions springs from the following experiment: Another person speaks through a tube into the larynx or trachea of fresh calf's lungs; I auscult over these lungs and I hear all over, the sound of the voice transmitted through the larynx or trachea strong and clear, at least stronger and clearer as is generally the case over healthy lungs of living persons. Over and over again I repeat this experiment, changing the lungs again and again, still the same result is obtained, and I ask for the cause. What physical principle constitutes such difference between lungs that speak, and lungs that are spoken into?

Although the experiment just mentioned is so easily performed that it can be readily tested by any one who has a wish to, I still consider it advisable to refer to such authorities as Skoda and Wintrich, who have both tried the same experiment, the one on human, the other on calf's lungs, and obtained a like result with myself.

Skoda says, page 59: "If we experiment on lungs taken out of the cavity of the thorax, the strength of the voice over the normal portion of the lungs can come near the strength of the voice which during life was heard over that part of the thorax which corresponds with the diseased portion of the lungs. The result is not different, if instead of speaking through a tube in the larynx, a sound similar to the human voice is there produced by blowing in the larynx with its glottis in a state of coarctation."

Wintrich says, page 128: "Far better and more do I hear over the larynx and trachea the vocal sounds conducted therein, when on lungs of a killed animal I speak in these parts through a tube. . . . . . From the same cause do I hear the words spoken in such a manner as the bronchial tubes and the parenchyma of the lungs over the whole surface of that organ, very clear and articulated, although spoken in a low voice. . . . . Nay, even through different and more bulky layers than the most muscular and the fattest persons have over their lungs; for instance, through the whole of the thoracic walls of the calf, I succeed in hearing over such lungs the words spoken into the trachea and larynx with distinct articulation, although somewhat weaker."

These experiments of Skoda, Wintrich, and myself, not only coincide with each other in their results, but they are also in harmony with similar other experiments, which I made with regard to the respiratory sounds transmitted in the same manner into the parenchyma of the lungs, and for which experiments—strangely enough never thought of by Skoda and Wintrich—I refer to a previous communication of mine in the March number of this Journal, "on the respiratory sounds." (Page 226.)

The fact, that in certain pathological conditions of the lungs the voice is heard stronger and more clear over the thorax of the person who speaks, and on whom we auscult, is, of all the others mentioned before, the one which has most exclusively engrossed the attention and scrutiny of medical philosophers. Laennec, Skoda and Wintrich may be considered as the standard-bearers of the different views taken of the subject. Laennec is of the opinion, that the infiltrated or compressed parenchyma of the lungs, as well as liquids in the cavity of the thorax, are better conductors for the sound than aëriferous tissue. Skoda appeals in the most unbiased manner to a few well established principles of natural philosophy and to a few quite plain experiments instituted by him, to prove beyond any doubt the utter fallacy of the theory of Laennec, which was adopted throughout France; and it is astonishing how, nearly twenty years since Skoda first opened publicly his contest against Laennec, with weapons none other than sound logic and an unbiased mind, there should still to this day, here and there, *cis et trans mare*, exist some stragglers of the French army. But every cause, every idea, and every theory finds its Epigones—be it table moving, know-nothingism or some special francomania.

Skoda's success in his criticism of Laennec must be considered complete, the more so, because as yet not a finger was raised in any part of the medical world, were it only to point at the allegation, that his arguments against Laennec are erroneous. In the same degree successful do I consider Wintrich in his strife against Skoda's consonance theory, the essence of which is that through certain pathological changes in the parenchyma of the lungs, the air-conducting tubes which pass through such portions, become enabled to effect a consonance; *i. e.* to make the air which they carry sound together with and through the sound of the voice, whereby the latter gains strength on its passage through such bronchial tubes to the parenchyma and the ear of the auscultator.

I say, that Wintrich's criticism of Skoda's theory is as decisive as is Skoda's criticism of Laennec's theory, and for both sets of arguments I must refer the reader to their respective writings, as I do not feel warranted to claim on that account the limited space of a periodical.

On the other hand, I am compelled to maintain that Wintrich is equally unsuccessful with Skoda and Laennec in his endeavors for the settlement of the vexed question.

His hypothesis is this: that in certain pathological conditions of the lungs, the air-carrying tubes passing such portions, become a kind of speaking tubes, with solid walls of a more homogeneous structure, that thereby they gain in reflecting power for the sound which they conduct to the parenchyma, which makes the sound more concentrated, and consequently stronger.

Now, with great respect for Prof. Wintrich, I take the liberty to proclaim it an unmitigated sophism to say, that because a sound is more strongly reflected on the inner surface of a tube through which it has to pass, that such sound will therefore be heard so much stronger, not at the open end of the tube, where the whole of the so reflected and concentrated sound will come out freely, but through the walls of such tube; when the fact of greater reflection of a sound on the surface of a wall is identical with the fact, that less of that sound passes through such wall outside. (*Vide* March number of this Journal, "On the Respiratory Sounds," where this argument against Wintrich is more fully developed.)

In this place I will confine myself to the quotation of one passage of Wintrich (op. cit.), as complementary evidence against himself. He says, page 128: "If I place my stethoscope over a spot of the laryngeal or tracheal wall, while the person on whom the exploration is made speaks, I notice already at every time a weakening of the articulated voice. The same is less intense than if I receive it directly through the stethoscope in my ear out of the mouth of the speaker; it is less round, and less distinctly articulated. This indistinctness is in proportion with the weakness of the articulated sound in the mouth itself. The reasons of this state of things are obvious. As I have already explained above, in passing from the mouth of the speaker into the ear of the auscultator, the articulated sounds go through a more favorable, more homogeneous medium, and as far as reflection of sound is concerned, under conditions more convenient for the hearing than is the case over the larynx and trachea, to which parts the sound is not so well reflected backward, and where, moreover, the sound has to pass the strongly reflecting walls of the larynx and trachea."

In other words, one of the reasons why the voice over the larynx and trachea is heard less strong and less distinct than out of the mouth of the speaker, is, that over the larynx and trachea the voice has to pass the walls of those parts which, on their inner surface, are very strongly reflecting. Consequently, the strong reflecting power of the larynx and trachea is acknowledged to weaken the vocal sound for the ear of the auscultator outside. Wintrich stabs his own theory.

We need not wonder at the abortive results of all the mental labors which such men as Laennac, Skoda, and Wintrich brought to bear upon the point in question. The question was taken out of its legitimate sphere; by an evasive technicality, and by a change of phraseology, it was dragged from the tribunal of physiology, where it properly belonged, and brought before the forum of pathology, and therefore it has as yet not received an impartial answer. Instead of inquiring after the cause why, in certain abnormal conditions of the respiratory organs, the vocal sounds are heard stronger over some places of the thorax through auscultation—which wording certainly has a pathological complexion—the problem ought to have read: why, in the normal condition of the lungs, the voice of the person over whose thorax ausculation is practised, is heard so weak and indistinct in comparison with the strength and clearness of the same voice as it comes out of the mouth, and is received by the ear at an equal distance in the free air? So formulated, the question falls within the province of physiology, and sound physiology begets sound pathology. Moreover, in this natural shape, the question becomes more simplified and less embarrassed; bias, prejudice, erroneous principles, and false conclusions are kept further aback, and the solution can be arrived at in a less tortuous way.

Once fully understanding the cause why, in the healthy condition of the lungs, the voice over the thorax is heard weak and less clear, we will not be at a loss to discover the reason why, and the circumstances under which, in pathological changes of the respiratory organs, the strength and clearness of the voice heard in auscultation over the thorax, increases.

And I may as well say here, that at the same time, all the other above enumerated differences in regard to the strength and clearness of the auscultatory voice between different regions of the thorax, between different persons, between different keys of the voice, between the right and left half of the chest, and last, but not least, between lungs that speak and lungs that are spoken into, will meet a ready solution.

The last mentioned difference must take precedence of all the others, as it is in itself the full answer to the whole many-headed question. The experiments of Skoda, Wintrich, and myself, on lungs of animals and cadavers, have shown that if vocal sounds are sent through a tube into the larynx or trachea of such lungs, or if (according to Skoda's experiment), by blowing in the larynx of a cadaver, a sound is there produced similar to the human voice, we hear these sounds far stronger and clearer in auscultating over the lungs, than is the case over the thorax of persons who speak.

These experiments at once make it impossible for any logical mind to suggest that the cause for the decrease of the strength and clearness of the voice over the thorax of a person with healthy lungs, on whom auscultation is made, lies with the structure of the lungs. The structure of the lungs, as a medium for the transmission of the vocal sound from the larynx to the ear of the auscultator, placed over the parenchyma is the same, if the sound comes out of such lungs, as is the case when a person speaks, or if it is conveyed there through the larynx, as exhibited in the above quoted experiment. And why should there be a difference in the strength and clearness of the voice in favor of the case, where the lungs are spoken into?

This consideration alone, so natural and obvious, must be sufficient to disclose the fallacy of the views of Laennec, Skoda, and Wintrich, who, with common accord, would have the structure of the lungs to be made preëminently responsible for the strength and clearness of the voice, and for the want of both or either.

I do not mean to say that the change of medium which the voice has to undergo, on its passage from the larynx to the ear of the auscultator over the parenchyma and the spreading of the sound through the innumerable ramifications of the air-tubes, does not influence at all its primitive strength and clearness. Such an assertion is absurd, *a priori;* for each change of medium must more or less take from the strength and clearness of a sound, and so must the spreading and splitting of a sound affect it. Moreover, we see that even in the experiment referred to, the voice transmitted through the larynx into the lungs, has there not quite the original strength and clearness, which can only be accounted for in the manner here alluded to, *i. e.* by the change of medium and by the attenuation which the voice suffers through its spreading and splitting on entering all the bronchial tubes.

But I certainly do mean to say that there must be still another cause, to which the additional diminution of the strength and clearness of the voice over the thorax of living persons with healthy lungs, in comparison with the voice which is transmitted to the larynx, and is auscultated over the lungs of dead animals, must be assigned.

And what can that cause be? It must of course be such as is only available in lungs that speak, and not in lungs that are spoken into. And what can be working in the one and not working in the other? What is the difference between the two? Turn as we may the subject, we can see no other difference than that in the one case *the lungs speak*, and that in the other *the lungs are spoken into.* That is the fact, and at the same time the explanation of the fact.

When a person speaks, the lungs are compressed through the action of the expiratory muscles, whereby the air within becomes condensated, so as to form an air current, which begins at the innermost recesses of the air-cells. This current produces the vocal sound at the rima glottidis; but at the very instant the vocal sound is produced it is carried off in the direction toward the mouth by the same current, to which it owes its existence. The voice, therefore, in its passage backward toward the parenchyma of the lungs, has to force its way against the current, so that in fact only a comparatively small fraction reaches the parenchyma, and it consequently appears to the ear of the auscultator much weaker and less clear, than it is heard over the larynx, or out of the mouth. Not so when we send a vocal sound into the larynx of calf lungs, or of healthy lungs of a dead person taken out of the thorax, or left within the same. This vocal sound spreads better toward the parenchyma, as it does not meet an antagonistic current, and must therefore be heard stronger and clearer than in the first case.

If a person speaks through a tube in the direction toward the north, and if the wind blows in the same direction, who would be astonished to hear that voice in the direction toward north, stronger and clearer than toward the opposite direction, at an equal distance? And this is more than a comparison with the case in question, it is nearly identical with it. There is no hypothesis, nothing problematical needed in support of this view; it is as clear as the light of day, it is as safe and firm as an axiom and as familiar as an every day's occurrence.

In engendering vocal sounds, that is, in making vocal expirations through the action of the expiratory muscles upon the thorax, the whole of the lungs is not brought under an equal muscular pressure; those parts which are placed beneath the more movable sections of the thorax will receive a greater share of the expiratory pressure, others will receive less of it, or perhaps none at all. Consequently, the air-current, which issues from the lungs at vocal expiration, will not have the same velocity in all parts of the lungs. It will be swiftest in those parts most and easiest compressed. The antagonistic action of the air-current to the propagation of the voice backward toward the parenchyma of the lungs, will therefore not be alike strong in all parts of the lungs; and as the subclavicular and still more the interscapular space of the thorax is anatomically the most firm, the least movable, the portions of parenchyma beneath these sections, must be least and only last compressed at vocal expiration; the current of air in these parts must be less swift, less antagonistic to the propagation of the voice, and therefore, the voice in these localities will be often heard stronger and clearer in auscultation; or it will there be heard as the real voice, while over the rest of the thorax it is only received as a murmur; or at last it will in these regions appear as a stronger and louder murmur than over the others.

I have explained above that the air-current in the right lung must, *cæteris paribus*, have less velocity than the current which at vocal expiration issues from the left ala. This will be sufficient to account for the fact that the voice, or the murmur in its place, is sometimes heard stronger and clearer over the right half of the thorax, and that in the healthy condition of the respiratory organs this is never the case with the left ala alone.

Further I have considered myself justified to postulate, that not all persons use the same amount of muscular action with the same suddenness to produce the vocal sounds; and I now add as a corollary, that the air-current in vocal expiration will, *cæteris paribus*, therefore not possess the same velocity in all persons, and that in some persons where it is more slow, the voice will find less obstacles to its transmission to the lungs, so that it will in such persons be heard stronger and clearer, or at least as a stronger and louder murmur than in others.

Should it be alleged that I have been too gratuitous in my postulate, and too hasty with its corollary, I confidently hope to meet with better success, when I contend that, *cæteris paribus*, the voice with a low key is produced by an expiratory air-current of less velocity than the voice of a higher key. The argument for it is this: it has long been a well established physiological fact, that the lower the vocal sound the wider open is the glottis, and *vice versâ*. Professor Czermak, of Pesth, has of late confirmed this fact anew by direct observation with the aid of Garcia's laryngeal speculum.—("*Physiologische Untersuchungen mit Garcia's Kehlkopfspiegel, von Prof. Joh. Czermak. Aus dem xxix. Bande, No.* 12, *Seite* 557 *des Jahrganges* 1858, *der Sitzungsberichte der mathem-naturw. Classe der Kais. Academie der Wissenschaften besonders abgedruckt. Wien*, 1858.")

Suppose, then, two persons with lungs of equal capacity, who in vocal expiration use the same amount of muscular action with the same suddenness, and who exhibit the same intensity of voice, but differ in its key. The force of the expiratory muscles being the same in both, the effect also must be alike, that is, a certain volume of air will be removed in a given time through the glottis, which volume will be the same in the one person as the other. But in the one person the glottis is narrower at vocal expiration than in the other, and it could not be that the same volume of air should be discharged through it in the same time as in the other person with a deep key, where the glottis is wider at vocal expiration, unless the velocity be increased. And this indeed is the case, according to well established aërodynamic principles, which it would be out of place here to consider more in detail.

Consequently, the voice with a deep key is, *cæteris paribus*, produced by an expiratory current of less velocity, than the voice with a higher key; the obstacle to the transmission of the deep voice into the lungs backward must also be less, and therefore this voice be heard stronger and clearer in auscultation over the thorax, compared with the high voice.

After having found the clue to the differences in strength and clearness of the voice, in auscultation over the thorax, between lungs that speak and lungs that are spoken into, between different regions of the thorax, between the right and left half of the chest, between different persons and between different keys of the voice, it cannot be difficult to understand why in certain pathological conditions of the respiratory organs the voice is heard stronger and clearer over some portions of the thorax.

If, through a pathological change, a portion of the lungs can not be compressed at vocal expiration, so that none of the expiratory air comes out of such part, if at the same time that portion of the lung contains an air-carrying bronchial tube, which is in open communication with the trachea and larynx, we will hear the voice in auscultation over the part of the thorax corresponding with such portion of the lung much stronger and clearer, sometimes even as strong and clear as over the larynx, because the voice has no air-current to overcome on its passage through such portion.

Compression or infiltration of a portion of the lungs, or a cavity within the same with rigid walls, which prevent its participation in the vocal expiration, will be apt to have such an effect, to exhibit the voice in auscultation, as what is called by the pathologists—*bronchophony*.

(*To be continued.*)

QUARANTINE, STATEN ISLAND, *April 12th.*

ORIGINAL LECTURES.

HYGIENE.

Being the Substance of a "Charge" given February, 1859, to the Graduating Class in the Medical Department of the University of Buffalo.

By FRANK HASTINGS HAMILTON,
PROFESSOR OF SURGERY.

GENTLEMEN: If we compare with each other the three learned professions, Divinity, Law and Medicine, we shall see between them a striking parallelism, and such as must command our special attention. They relate severally to the interests of the soul of man, to his civil interests and to his physical. The priest is responsible for the faithful exposition of the divine messages which are intrusted to him embodied in the ten holy commandments, and called the Laws of God. The lawyer is responsible for a just interpretation and righteous administration of the Laws of State; and the physician is responsible for an earnest and complete declaration of the Laws of Health.

It does not interest us now to know which of these professions contributes most to the great end and sum of human happiness. Each, no doubt, has its place and position, and perhaps its rank; and each in its appropriate sphere may extend its walls and build outward to the world's limits, and yet the one need not at any point jostle or trench upon the other.

We propose only to inquire which of these three has performed its functions most completely and efficiently; believing that it will be found that in one essential particular the profession of medicine has hitherto grievously failed.

In the homely proverb "an ounce of prevention is worth a pound of cure," is embodied a great truth of universal application; and applied to the liberal professions, it instructs us that each embraces two distinct arts, which may be called respectively the art of prevention and the art of cure.

As to the manner in which we have performed our duties in this last respect, the world has but little reason to complain of either of us.

The clergyman as well as the physician visits the dying patient, and in the last hour of a life spent in sin, finds the unhappy soul laboring under a moral leprosy which nothing but the grace of God can remove. With a zeal which challenges our admiration, he addresses himself to the work commissioned to him; nor do his labors cease until the light of intelligence has altogether gone from the eye; not until the windows of his soul are darkened, and the heavy casements are closed forever.

The lawyer visits the prisoner in his cell, and listens attentively to his own account of his offence. He writes down carefully every circumstance of palliation; and when the day of trial arrives he stands before the court, armed with all the evidence which his genius can invent, which the laws and decisions can supply, or which the facts themselves will warrant in proof of the innocence of his client.

So also the physician, when summoned to the bed of sickness, does not fail one whit of his responsible duty. He hears patiently the history of the source and progress of the sufferer's malady, and examines carefully his present condition. He counts every wave of his feeble pulse: he listens attentively to the murmur of his breathing, and measures the drops upon his brow. All that science or art has contrived for the preservation of life, or for the mitigation of suffering, is impressed speedily into his service; nor does time or season interrupt his anxious labors. Night does not suspend his vigils, nor does the storm delay his attendance.

Over the entrance to the house of the Royal Humane Society in London is placed a basso-relievo, representing an infant blowing upon a few expiring embers, and underneath is written *Lateat forsan scintilla*—Perhaps a spark lingers. So we have often seen the physician, in cases of sudden death, unwilling to trust to the judgment of his erring senses, continue his efforts to awaken the spark of life, long after all just grounds of hope have ceased.

In the practice of the art of cure, gentlemen, we yield nothing to either of our noble sisters. To this duty we have brought as much talent, and genius, and persevering industry as have the members of either of the other liberal professions, and I think they will not hesitate to make us this acknowledgement.

Let us see now whether we can fairly claim as much for ourselves in that other and broader field, the art of prevention.

Divinity begins to instruct its pupil almost as soon as the petals of its intellect commence to unfold themselves. Like a gentle dew it distills upon the opening bud from the earliest dawn of life, imparting a color and fragrance which is never afterward wholly dissipated. In the nursery, religion and morals are taught by the catechism, and by the simple, but to the child, the yet unmeaning prayer, repeated silently both morning and night at the bed-side. The mother daily watches the growing plant; like a faithful gardener, she supports its tender stalk gently in her hands that it may continue to grow heavenward, while its fibre is becoming harder, and its habits and direction are becoming fixed.

The same watchful care follows the child wherever it goes. In the Sabbath school pious teachers, the Bible and its commentaries, with a library of well chosen volumes, repeat the lessons of morality. The child himself soon becomes a teacher, and his knowledge advances far beyond the simple rules of virtue to the more abstruse doctrines of the church.

The clergyman also warns from the pulpit, Sabbath after Sabbath; he exhorts, entreats and threatens.

Is not the Bible in every man's dwelling?

In Christian countries, like ours, men never plead ignorance in justification of their moral offences. This would be a shame, greater than the offence itself.

Law, too, is taught from infancy to manhood. The legislators print their laws in newspapers and in books, sufficient to reach every citizen of the State. The judges publish in the daily journals their new decisions. Lawyers, speaking openly in the numerous courts, proclaim and interpret these decisions; and in republican governments, founded upon the doctrine that the people themselves make their own laws, the principles and maxims of government are harangued and discussed in nearly all public political meetings and in most private assemblies.

In all civilized governments it is assumed that every man knows the laws of the state under which he lives, and that the plea of ignorance can therefore never be received in extenuation of an offence. *Ignorantia legis neminem excusat.* And if the assumption is in some sense a fiction, nevertheless it is true for all practical purposes, since it is very seldom indeed that a citizen breaks a statute through ignorance. The vast majority of mankind in civilized countries live in obedience and suffer no penalties.

Whatever of violation of the laws of God or of man, therefore, exists, is, as a rule, intentional and defiant; but in relation to the laws of health the argument is wholly different—gross and unmitigated ignorance is the almost constant rule, and the exception is the other way. Children perish of bad air and of bad nourishment because their parents are ignorant of what constitutes good air and wholesome nourishment. Men die of indigestion and of physic because they do not know what causes indigestion, and because they have never been taught that there is death in physic.

It is true that many transgress the laws of health who know well enough what they are about. This is true often of soulless municipal corporations, and of more soulless masters; it is true also sometimes of men in relation to themselves, of men whose ambition or greed renders them reckless of life; but will you say it is true of parents in relation to their children? Can you persuade yourselves that it is true of any of those ten thousand examples, forever recurring, in which the ties of family, or the general obligations of humanity seem to impel men and women to give advice in relation to the preservation of health, which proves so often unfortunately the occasion of death? With the most sincere and earnest desire to do good to their fellow beings these people never cease to do harm.

I do not magnify the evil in this respect. Says the venerable and learned Dr. Francis of New York, "That ignorance of the laws of life, of the rules of health and of the remedial powers of medicinal substances, prevails to a wonderful degree, even in exalted places, is an incontrovertible position."

There is everywhere, among the people a most fatal ignorance upon this subject; and if physicians are not responsible for it, I do not know who is. It has not been intimated that our profession has not occupied itself sufficiently in the investigation and ascertainment of the means of preventing disease. On the contrary, we have ourselves well understood its importance and in the course of your medical reading, and of the term of instructions which has just closed, your attention has been repeatedly called to it. We do not think so much time and talent has been expended upon any department of our science as upon the subject of public and private hygiene, and especially during the last quarter of a century. With incredible labor, facts bearing upon this matter in all its relations, have been gathered, condensed and analyzed, and practical conclusions of the greatest value have been drawn, and indeed established with consummate accuracy. Says Dr. Francis, to whom I have already referred, "Hygiene, state or political medicine, has long constituted an important branch of medical education on the European Continent. The Teutonic nation has long been conspicuous for its labors on this subject, and Italy recently has manifested the most patriotic spirit toward its encouragement."

In our own country we may also refer you to the names of Drake, Mitchell, Emerson, Hayward, Driscom, Dunglison, Forry, Barton, Reese, and many others, as men who by their labors and writings have thrown much additional light on many of the subjects connected with general hygiene; or indeed not to go beyond this city, I may mention with pride the name of Hunt, whose elaborate paper on the hygrometric state of the atmosphere in various localities, and its influence on health, written by order of the American Medical Association, and published in its "Transactions," for the year 1855, taken in connection with the observations previously made by Dr. Barton of New Orleans, has established certain laws relating to the influence of humidity and temperature on health, which need no further confirmation; and which, if recognized and made practical, may hereafter prove of incalculable benefit to the human race; and also to the name of Newman, whose report to the same body on the "Sanitary police of cities," published in the "Transactions," for the year 1856, embodies a mass of facts and practical conclusions which, if understood and carried into effect by municipalities, could not fail to diminish greatly the rates of mortality in large towns. The paper is profound and valuable, far above the measure of his years, and has received the approbation of the press and of the profession everywhere.

It is just this of which we complain: whatever may be said of the uncertainty of our curative means, and however much we may differ upon points of general practice, in this department at least we have arrived at conclusions which are definite and settled to a degree scarcely credible. All intelligent physicians speak and think alike on this subject; and even leaders of empirical sects, little as they may know of, and less that they may have contributed to these conclusions, do not venture to differ from us in relation to the general laws of hygiene. We complain, therefore, that in reference to the most important branch of our art, and that of which we really know the most, the people, to whom we administer, know the least.

The only apology which we can find for ourselves is that we lack in some measure the means of conveying this information to the people.

If the Bible and the statute-books were the only channels through which their instructions could be conveyed to the multitude, many must have forever remained in ignorance even of those ordinances which are the most simple and easy to comprehend; since many are unable to read, and others would never incur the expense, nor devote the time requisite to possess themselves of such knowledge; but, as we have seen, such is not the fact. The Bible and the statute-book are the sacred wells from which all who wish may freely drink; but their waters are carried in pitchers to those who are unable to reach the fountains, and by ten thousand ministering hands lifted to the lips of those who are ready to perish.

But the physician has very few helps in his labor of diffusing medical knowledge of any kind. The people do not go up to Siloam; and the physician must not only draw from the pool, but he must himself carry the buckets upon his own shoulders, and cry out at every man's door—up and down—in the narrow gangways and in the cellars of the poor, and the houses of the rich.

Our books are sealed in a great measure, even to the intelligent lay reader. Our opinions are never discussed or asked in public assemblies. The physician never enters the forum. Even the daily prints, which are subservient to the other professions, and which might be made subservient to ours, are so constantly filled with lying and scandalous advertisements, under the pretence of disinterested medical counsel, that all respectable physicians would refuse to occupy their pages, even if allowed to do so.

Beyond the little that can be accomplished through the medium of our standard books and our medical journals there remains, therefore, only the channels of private communication: but these channels, each one of which is narrow, and necessarily limited in its influences, are in the aggregate so numerous and so broad that they ought to be ample for all the purposes required. All men, sooner or later, and most men constantly seek advice from doctors. The desire to take medicine is as universal and seems as natural to man, as is religion: indeed, there are those who appear to think this the great end of human existence. The nurse administers medicine to the infant as soon as it breathes; and by one or another it is poured into the mouth of the dying man until he ceases to swallow. From birth until death he feeds upon it—blessing him who gives, and turning away from him who withholds it. Few men are born, fewer die, and none live without a doctor! The opportunities, therefore, will not be wanting. It is only necessary that they should be faithfully improved, and that with each pound of cure you administer the one ounce of prevention.

Where will you begin? In what manner shall you address yourselves to this work of reform?

It is not very material, we think, where the labor is commenced. The field is fallow everywhere about you, and wherever you plow you will open a virgin soil. In all of the civilized countries of Europe, and especially in Great Britain, hygiene not only is studied, but it is practised, and its results are seen in the stouter forms, and happier faces of the people. Even London, with the largest population of any city in Europe, has, we are told, the lowest rate of mortality among its inhabitants. We, as a nation, although sprung from the best blood of Europe, the blood not of kings, or of nobles, but of laborers, who drew their milk from the bosom of the earth, and whose veins were enriched with its strong juices, are already physically the most feeble, and seem rapidly falling into a premature decay. M. Mayor, late of Lausanne, in Switzerland, a distinguished surgeon, who is now a resident of this country, in a letter addressed to the writer a year or two since, expresses his astonishment at the habits and physical condition of Americans, and especially of American women. He says they are pale and without strength, and at the present rate of degeneration he cannot see how our race can survive more than a few generations. Nor is he at a loss for the cause of this decadence, when he observes how constantly both in the city and country they shut themselves up in close and overheated houses, as people do nowhere else in the world. All travellers among us notice the same alarming facts, and disguise it as we may from ourselves, the common sentiment of intelligent foreigners, as well as my own personal observation, confirm the truth of the comparison.

It was not my purpose at first to do anything more than to call your attention in this general way to the importance of the subject of general and special hygiene, and to persuade you that there is something more for you to do than to administer drugs : indeed, I wished to convince you that you have a work to do which we have left undone, namely to enlighten your patrons, the people, upon this subject. I trust that I have not failed in my purpose, and that you only need to be reminded of your duty to secure from you its faithful performance ; but I cannot forbear, especially as the time seems to permit, to speak a little more in detail of certain practices which especially demand reform.

Men must be first made to understand fully that the laws of nature in regard to health are inviolable, and that no man can any more break them with impunity than the laws of nature relating to the motion of the planetary bodies can be disturbed without interrupting the harmony of the universe. "If celestial spheres," says Hooker, "should forget their wonted motion, and by irregular volubility turn themselves any way as it might happen ; if the prince of the lights of heaven which now as a great giant doth run his unwearied course, should, as it were, through a languishing faintness, begin to stand and to rest himself ; if the moon should wander from her beaten way, the times and the seasons blend themselves by disordered and confused mixtures, the winds breathe out their last gasp, the clouds yield no rain, the earth be defeated of heavenly influence, the fruits of the earth pine away as children at the breasts of their mother, no longer able to yield relief, what would become of man himself, whom these things do now all serve ? See we not plainly that obedience of creatures unto the law of nature is the stay of the whole world ?"

It is a law of nature that man cannot live without air. Air is the "breath of life," created, too, with invariable elements, and with invariable proportions of oxygen and hydrogen; from which we ought to learn that these elements in these exact proportions, are more natural and most needed for the growth and repair of the human system. They cannot be increased or diminished, alternated or modified in any way without detriment to health; you will find, however, that the great majority of the people who are to employ you, do not know this, or if they know it, they, at least, act as if they did not.

They build strong, air-tight houses, and shut themselves up in them; they make double windows, and place strong porches over the doors; they have even walled up the open fire places—in short, they have adopted every possible expedient to render it certain that no air shall get in or out; and now they sit down to breathe the few cubic inches they have imprisoned, until in the laboratory of their lungs they have converted nearly the whole into carbonic acid.

Within a few years the air-tight stove has been substituted for the iron dogs, and for the first time since men began to live in houses we have no "fire-places." The shrine of the Lares has been removed, and our houses have been literally pillaged—robbed of the domestic hearth, toward which so many associations have always centered, for which the blood of nations has been poured, and which in all ages has been regarded as the symbol of home with all its social comforts.

Not content with this, these enemies to our race have still more lately taken away the stoves which, destitute of the essence, still occupied the places, and served to remind us at least of the ancient fireplaces; and instead, they have built for us iron furnaces—Ætna's—under ground, so that now what of the oxygen we are not able to consume and convert into carbonic acid, is vitiated by impure gas escaping from its hidden chambers, by invisible particles of coal dust, and by other impurities which clog up the air-cells, and close the avenues of life, or stick along the parched fauces as if reluctant to convey their poisons to the lungs.

Stoves have no doubt abridged the sum of human life, but by these subterranean iron furnaces we are truncated—cut short in the middle. It is an error to suppose that hot-air furnaces can ever be so constructed or managed, at least in private houses, as not in any degree to prove detrimental to health. We wish we could persuade ourselves that this is not so, for it is certainly very agreeable in a climate like ours to enjoy throughout all the rooms and passages of the house warm and uniform temperature; but it is just this even warmth which is one of the sources of mischief. The inmates are so little accustomed to the cold within doors, and become so morbidly sensitive that they shudder at the idea of going out, and if they ever do venture into the air, the frost enters into their open pores, and they hasten back to their shelter, chilled, exhausted and discouraged. They are no better able to endure the storms of winter than a plant reared in a hot-house. It was the venerable Bede, I think, who said, "When men lived in houses of willow, they were of oak; but when they lived in houses of oak, they were of willow." But the willow, which bows to the storm and hangs its pliant arms to the earth under its weight of frost and snow, has elasticity in its fibre, such as you will not find generally in the occupants of oaken houses at this day. The cockneys of this generation and of this country are no longer even men of willow, but men of straw, from whom the marrow and essence of life is dried out; or if they still retain some natural moisture, the spirit at least is gone, the alcohol is evaporated, and they congeal at the same temperature at which water freezes, and are as worthless for all practical purposes in this climate as spirit thermometers would be if supplied with water instead of wine.

The truth is, unwelcome as the truth may be, that we must accustom ourselves to moderate cold within doors before we can successfully resist the extreme cold without doors, and for this reason no rooms ought to be warmed in any man's dwelling, except those in which the family sit and eat. The halls and bed-rooms at least should be kept carefully cool, so that the inmates may, during a large part of their in-door lives, enjoy its invigorating and acclimating influences.

For us who live at the North to occupy constantly heated apartments, is as irrational and suicidal as it would be for those who live under the tropics to shelter themselves, during the heats of the day, in an ice-house, or in underground apartments.

There are many other evil consequences resulting from living in overheated rooms, to which I do not find time to allude; but allow me to remind you of the process by which the livers of geese are diseased, and from which the celebrated "pâtés des foies gras" are prepared. The poor animals are nailed by the feet to a plank, and placed in ovens or before hot fires, while their stomachs are constantly crammed with food. If we do the same to ourselves, I do not see why the consequences may not be the same, nor why a race of anthropophagi might not hold in equal estimation the livers of men and women fed and fattened in these modern ovens.

But to return to the subject of which I was more especially speaking, namely, air, ventilation and furnaces. Says Dr. Morland, the able editor of the *Boston Medical and Surgical Journal*, in a recent notice of Dr. McCormac's opinion that the inhalation of carbonic acid is the great cause of consumption, here and elsewhere: "We believe that in its effects on the physical constitution, the great majority of mankind are more ignorant of the importance of the quality of the air they breathe, than of anything else, and that hygienic reform is needed in this direction more than in any other. The evil is one which exists among the rich as well as among the poor, though not to the same extent. We doubt, however, whether the 'middle classes,' as they are called, inhale a purer atmosphere at night than the poor. The destitute have one comfort, there are no furnaces in their houses, and if there be but little fire, there are at least fire-places. Many of our houses have neither fires nor fire-places, consequently the circulation of air is very languid, and the atmosphere becomes speedily contaminated with carbonic acid, especially at night and in cold weather, when all the doors and windows are closed, as is too often the case."

Talk of ventilation! Gentlemen, there have been no ventilators yet contrived, equal to the open throat of a large, old-fashioned fire-place, with its stream of hot air rushing upward, compelling the pure air from without to find an entrance somewhere, in order to supply the rapid waste.

If this mode of heating is more expensive, which we very much doubt, since radiated heat is not wasted in the upper parts of the room, and consequently is much more effective for the purposes for which it is needed ; still, admitting that it is more expensive, it costs less in the long run than debility, neuralgia, rheumatism, inflammation, coughs, colds, and consumption. It is less expensive than doctor's fees, or than physic, even if the doctor's fees are never paid.

In private houses, and in public, in jails, and in alms houses, and especially in large and crowded school-rooms, will these abuses of oxygen invite your attention, and demand your earnest protest.

But the purest air is out under the broad roof of heaven. There the invalid may find a medicine cheap and abundant, and more efficient, often, than all the bones of the Pharaohs or than all the remedies contained in a score of drug shops. The man who is well, also, may find there a plentiful stimulation, oil for his marrow, vigor for his mind, and iron for his muscles. A great writer has said, " Man decays when man contends with storms ;" but we think ourselves wiser than the Greeks, at least in some matters. When man wrestles with the storm he gathers strength from the contest. A cold north wind, with a driving snow-storm, shortens the ham strings, converting the pliant tendons into sinewy thongs, which, as every surgeon knows, will sooner break the bones than yield themselves.

Exercise with recreation are only second in importance to pure air. Exercise without recreation is useful; but to develop its full value the mind also needs to be relaxed and agreeably entertained. The gymnasium and the riding-school are excellent means of promoting health, and of increasing bodily vigor ; but the skating pond, the swimming school, the ball club, the pleasure yacht, the gun and the fishing rod, the horse and saddle on a mountain road are worth much more.

Girls at school may practise the monotonous drill of arm stretching—or, as it is called technically, " calisthenics"—as skillfully as the soldier handles his gun in the company drill, but without the tapping of the drum and the thrilling notes of the fife, "with the pomp and circumstance," they cannot feel their heart-strings vibrate, and the blood tingle in their fingers. Instead of marching these young maidens in platoons and in solemn procession along the fenced streets, upon the paved sidewalks, it would be much better to take down the bars, unloose the halters, and turn them out into the open pastures like young colts, for a hurrah girls, and a wild stampede—a regular steeple chase. And while the prancing and frolicking goes on, let the teachers look the other way; or, if they choose, let them join also in the wild and unrestrained romp, and I tell you there will be good from it all around. Pale faces will grow ruddy, crooked backs will become straight, appetites will be sharpened—even the meats in the steward's hall will be more tender, and the beds will be softer.

Women need health as much as men, and more. Then they ought to have the same physical training. Girls must get strength just as the boys do, by running, jumping, climbing, laughing, and by all sorts of general vagrancy, until the pent up spirits are sent bounding and leaping through all the veins. If any mother feels shocked at this advice, we can only say we have not made the laws of nature, and our profession is therefore in no ways responsible for these inevitable inferences. If such practices are inconsistent with the natural delicacy and a becoming dignity in young ladies, we reply that we do not propose to teach the proprieties of deportment; we speak as physicians who hold ourselves answerable only for the training of the body. Calisthenics may be very genteel and romping very ungenteel, but that is the business of others, not ours. We hold, and it is our duty therefore to teach, that calisthenics is the shadow and romping the substance of healthy exercise.

Says Sterne: "Nay if you come to that sir, have not the wisest men in all ages—not excepting Solomon himself—have they not had their hobby-horses, their running horses, their coins and their cockle-shells, their drums and their trumpets, their pullets, their maggots, their butterflies?" My friend, a well known and very distinguished doctor of divinity, believes that I also ride a hobby, since I will prescribe no medicine for him but a horse; and I frankly confess that he has good reasons for his belief. It is a part of the speaker's creed that all religious congregations should first built a barn, and buy a horse with a saddle and bridle; all which should be sufficiently endowed so as to cover every future necessary expense; and that as soon as the horse is properly installed, and not before, they may proceed to install a pastor. This doctrine, in which we fully believe, has reference no less to the interest of the church than to the interest of the clergyman. It will secure one original sermon on every Sabbath morning; it will obviate the necessity of assistant chaplains and save the expense of a voyage to Europe once in five years. It commends itself especially, therefore, to the consideration of poor and feeble congregations.

The utility of horse-back exercise is not limited, however, to clergymen and their congregations. It is, in our humble opinion, the best exercise for both men and women, whether within or without the church; combining, as it does, the largest amount of active and passive motion, with agreeable excitement. The trout may refuse to nibble, and the game to start, but upon the horse there is certain pleasure beyond all contingencies. The rider is above everybody else, he goes faster than anybody else, and he is very sure that he rides and manages a horse better than anybody else. He has, for the time, a kind of ideal and not actual being, and rides his horse as a poet rides his pegasus. At one moment he imagines himself a general at the head of an army; at another, an emperor making a triumphal entry; now he is a knight, returning from conquest, and now, perhaps, he rushes in battle; or he is riding a fierce race, and he springs in his saddle as if ten thousand bright dollars depended upon the result. Not that he actually believes all this, but only that he feels somewhat as if it were so, or might be so. When he presses his spur into the tender flank, and his horse plunges and prances, he also plunges and prances like his horse. He feels as if, in riding him, he was a part of the noble animal himself, and that he is indeed what the Thessalians were reputed to be, half man and half horse—a real Centaur.

We cannot tell you what a horse will do with that precision and minuteness with which an empiric recounts the diseases which his hobby will infallibly cure, but we are certain that our hobby will reach a great variety of cases; and we believe that a horse—one horse a day—is good for almost everybody, if properly administered. Some will require to be cautioned against riding too violently, while for the benefit of others you must add the directions usually given in the old polypharmic prescriptions: "when taken to be well shaken."

Apropos to this subject, allow me to read to you a portion of a very sensible and spirited article from the columns of the *New York Times*, in which a comparison is instituted between the relative merits of carriage and horse-back exercise:

"The plans for the Central Park are now undergoing examination at the hands of the Commissioners, and it is perfectly fair to suggest one or two points which deserve more notice than they are likely to receive, in arriving at any decision on the merits of the competing schemes. There are various portions of the public whose tastes and interest must be consulted in laying out the grounds, but there are some more likely to be unduly cared for, and some not likely to be cared for at all. Military companies, cricket players, skaters, strollers, loungers, are all sure to be provided for amply. There are two other interests, however, which must be impartially dealt with, and whose claims, are nevertheless somewhat conflicting—we mean the carriage interest and the saddle interest.

"The driving of vehicles is a great institution among us, and may be safely said to constitute almost the only out-door amusement of the majority of our male population. The ambition of every fast man, young or old, is to possess a wagon with one or two trotting horses attached, and so exclusive has of late years been the devotion to this species of recreation, that the art of riding on horseback may be said to be almost extinct among us. Between the two modes of rejuvenating either mind or body, there can be no sort of comparison. Apart from its interest in the betting ring, and its influence on horsebreeding, there does not exist a more unsightly and piteous specimen in nature, than a fast man, wrapped up in furs in a wagon, with extended arms, forcing a horse along at twenty miles an hour. There is no physical benefit to be derived from the operation; inasmuch as the movement is not sufficient to exercise the muscles of a delicate school-girl, and it cultivates no one quality of body except quickness of eye, and a cobbler's manual dexterity, and it cultivates no quality of mind, save the habit of attention.

"We think in the whole range of national amusements, it would be hard to find one so extensively pursued, which results in less benefit either to the national *morale* or the national *physique*. It has here at the North taken the place of everything else, and the result is and must be, physical deterioration. The finest races of the world, physically, are and always will be equestrian races—races who love to devote the horse to his first and noblest use—the saddle. There could be no better examples of the truth of this than are furnished by the Poles, Hungarians, Turks, the upper classes in England and the Southern planters in this country. In all of these, equestrianism is a passion, and the art of managing a horse well, while sitting on his back, is justly looked upon as the manliest and grandest of sports. The horse was made to be ridden in the saddle, and his devotion to other purposes is one of the necessities, perhaps, but also one of the abuses of civilization. Dragging laded vehicles by pulling from the shoulder, is an occupation only fit for bullocks, and in those countries in which the horse is held in most esteem and in which he exists in greatest perfection, it is a use to which bullocks only are put. Kingsley is not far wrong in saying that, to be a bold rider, is presumptive evidence of divers other good qualities. The man who takes a six-barred gate in a flying leap is certainly a man in whom there is fine raw material, and the reason is obvious. Riding in the saddle, and above all hunting in it, develops the qualities of which, in their highest perfection, heroes are made. It teaches presence of mind, courage, quickness of eye, coolness in danger, self-reliance ; it teaches that most invaluable of things to be learned—mind and body to act together ; brings eye and limb and will into harmony, and makes the *morale* and *physique* work together for health and happiness and beauty.

" How much wagon-driving, 'granny'-fashion, with swathed legs, will give our young men's chests an inch in breadth, or add an ounce of flesh to their attenuated calves?

" If riding on horseback were the fashion, as it ought to be, New York parties would present less frequently the lamentable spectacle of cavaliers the same height and not half the breath of their partners. The narrow-shouldered, lanky beaux, who haunt our ball-rooms, are standing appeals to the Park Commissioners to do anything that in them lies to bring back amongst us the ancient and manly art of riding on horseback. Nothing will do so much to toughen our muscles and inflate our lungs. Nothing can brace nerves that tobacco juice and gin slings have unstrung, half as well as a hard-mouthed, well-fed, vicious horse on a fine spring morning. To make even a beginning, however, we must have a good straight ride, or one with no turns that we cannot see round, so that there may be no danger or collision, and into which no vehicles should enter. The almost total abandonment of equestrian exercise in New York is in a great measure due to the want of any place to ride in with safety to horse or rider. Places frequented by fast-trotting wagons are out of the question, because a horseman runs imminent risk of being run down at every stride by another class of pleasure-seekers, whom an infinity of drinks render unfit for any amusement but that of sitting bolt upright in a wagon, holding on by the reins, and shouting at a degraded steed. We hope the Central Park Commissioners will give us, at all events, a good road for horseback riding in the Park."

Our ladies need also to be taught the value of light, independently of air. " When a gardener," says Johnson, " wishes to etiolate, that is, to blanch, soften, and render juicy a vegetable, as lettuce, celery, etc., he binds the leaves together, so that the light may have as little access as possible to their surfaces." In the same manner, the ladies, instead of opening their petals to the sun, as do the plants naturally and instinctively, cover their faces with veils and parasols to shut out its impertinent rays, and in order that they may etiolate themselves as completely as possible. Take some pains to convince your patrons, and especially to convince mothers of the value of light; assure them, however, that to compensate for the loss of the lily, where the sun has cast his shadow, he seldom omits to plant the rose.

There is a natural connection between dress and exercise, although I suspect it has never occurred to you to consider dress in this light. Ladies' dress, which has constituted the point of so many jests and sarcasms, and has been the burden of so many cruel philippics and sober homilies, still needs, I am sorry to say, some reform; and ungracious as the service may seem to you, gentlemen, you will not be at liberty to withhold your voice.

It is not a question of hoops or of bustles, of mutton or of bishop-sleeves: these are matters of taste, which we would leave them to settle among themselves; only claiming for ourselves the same exemption from officious criticism.

But how can any lady go out of doors who "has nothing to wear?" Can she go out in cloth shoes?—I mean in this climate—in cambric dresses and without any bonnet upon her head? Yet they have actually, for the most part, no shoes or dresses or bonnets which are suitable, or which were ever designed to protect them from the rain or snow, or from the cold.

But in this respect our men are no better off. American gentlemen have adopted as a national costume, broadcloath—a thin, tight-fitting black suit of broadcloth. To foreigners we seem always to be in mourning; we travel in black, we write in black and we work in black. The priest, the lawyer, the doctor, the literary man, the mechanic and even the day laborer, choose always the same unvarying, monotonous black broadcloth; a style and material which never ought to have been adopted out of the drawing-room or the pulpit; because it is a feeble and expensive fabric; because it is at the North no suitable protection against the cold, nor is it indeed any more suitable at the South. It is too thin to be warm in the winter, and too black to be cool in the summer; but especially do we object to it because the wearer is always afraid of soiling it by exposure. Young gentlemen will not play ball, or pitch quoits, or wrestle and tumble, or any other similar thing, lest their broadcloth should be offended. They will not go out into the storm, because the broadcloth will lose its lustre if the rain falls upon it; they will not run because they have no confidence in the strength of the broadcloth; they dare not mount a horse, or leap a fence, because broadcloth, as everybody knows, is so faithless. So these young men, and these older men, merchants, mechanics, and all, learn to walk, talk, and think soberly and carefully; they seldom even venture to laugh to the full extent of their sides.

The cloth manufacturers and the tailors have shut us up in tight coats, and these in their turn have shut us up in tight houses. Clothiers and tailors have woven and cut out our national character. Allow me to make the dress of a people and you may make their customs, is as just a maxim as the older proverb, "Allow me to make the songs of a people and you may make their laws." Dress affects nations as it does individuals; and when Beau Brummel exposed to his royal patron the grand secret of his life, and especially of his famous cravat—"starch makes the man"—he taught a profound and useful lesson.

There are a multitude of other subjects pertaining to general and special hygiene to which I cannot at present even allude, since I have already detained you too long; you see at least the direction in which the reform is most needed. We need for our dwellings more ventilation and less heat; we need more out-door exercise, more sunlight, more manly, athletic and rude sports; we need more amusements, more holydays, more frolic and noisy, boisterous mirth. Our infants need better nourishment than colorless mothers can ever furnish, purer milk than distilleries can manufacture; our children need more romping and less study. Our old men more quiet and earlier relaxation from the labors of life. All men, both young and old, need less medicine and more good counsel. Our cities need cleansing, paving and draining. The Asiatic cholera, the yellow fever, the plague and many other fearful epidemics are called the opprobria of our art, and our fellow-citizens upbraid us with the feebleness and inefficiency of our resources in staying their fatal progress. When will they learn that although we do fail to cure these maladies, the more precious secret of prevention is in our possession, and has been for these many years?

In conclusion, gentlemen, whether I have justly held my profession in some degree responsible for the ignorance of the people upon this subject or not—wherever the fault may lie, the fact remains that multitudes perish for the lack of that knowledge of which our libraries are the sole repositories, and which our efforts and teachings can alone supply; and while I am reluctant to add one straw to the many heavy, and often self-imposed burdens, which will rest hereafter upon your shoulders, I know you and the members of my profession generally, too well to feel any hesitation in calling your attention to any one of the claims of humanity, and in entreating you to give to this one that consideration which the magnitude of the interests involved seems plainly to demand. One moment more—

Do you hear a distant murmur of voices, and a confused sound, as of an excited multitude? This is the great battle of life waging incessantly without. Waving to and fro, a vast tide of human beings are crowding, struggling, contending for a thousand named and for ten thousand nameless objects—bearing down the feeble, trampling without mercy upon the fallen and crushing out the manliest hearts in its mighty press.

In a few days, probably, a violent and unexpected jostle—a well aimed and staggering blow upon an unprotected point—a sense of weight and irresistible pressure upon the chest, accompanied with a feeling of impending suffocation, will admonish you painfully that you have at last entered fairly into this conflict. Now take care of yourselves. If you do not, be sure no one will take care of you. Stand firmly on your rights, no matter who disputes possession. Do your best to acquire fame, power, money—yes, get rich if you can, for nobody in this wide world has a better right, or a poorer chance than you; but, in the name of your alma mater we entreat you to contend honorably. If these things are to be attained at the sacrifice of honor, let them pass as baubles not worth the self-respect to be paid out in their purchase. Be strong and defiant even, if necessary, but never mean or treacherous. Be liberal to the poor. Be wise and prudent, but never let policy sit above conscience. By which I mean plainly, if a rich man needs your physic, give it to him, and let him pay for it; but if he does not need it, tell him, like an honest man, that his money will not buy it. Despise tricks—placebos and sugar pretences—as beneath the dignity of men. If our patrons dare not take our advice, they certainly ought to be afraid to take our medicines. And whenever you are driven to the humiliating necessity of pretending to give medicines to sane men and women, because, while they do not need it they will clamor for it, I shall advise you to abandon your profession, and look out for some occupation which will give you a more respectable and a more honorable living.

And now, gentlemen, having given you these last words of counsel and admonition, permit me, in behalf of myself and my colleagues, to bid you all an affectionate farewell!

LECTURES ON VENEREAL.

Delivered at the College of Physicians and Surgeons, of the University of the State of New York.

By FREEMAN J. BUMSTEAD, M.D.,
SURGEON TO ST. LUKE'S HOSPITAL.

Lecture I.

Introduction: History of Venereal Diseases.

Gentlemen: Before entering upon the study of any class of diseases, it is an interesting subject of inquiry, how long these diseases have been recognized as such, in what light they have been regarded by our predecessors, by what means they have been combated: to ascertain, in short, their history up to the present time, and the successive steps by which the medical mind has arrived at its present stand-point of view. Such interest attaches itself peculiarly to the study in which we are about to engage, that of Venereal Diseases.

This class of affections is so striking in its characteristics, so peculiar in its manifestations, and so intimately connected with one of the strongest passions in man, that all that concerns its history naturally attracts our attention. It will frequently happen that a patient suffering from gonorrhœa or syphilis, will ask you: "Where did this disease come from originally?" "Did they use to have such things in the olden times?"

Nor is the solution of these questions a mere matter of idle curiosity. It has important bearings upon several points, which are of practical importance in connection with venereal. For instance, it may assist us in determining whether the more common venereal affection, known as gonorrhœa or clap, is identical with that less frequent disease, which commences with an ulcer or chancre, and is liable to result in an infection of the constitution or constitutional syphilis. Again, there is another question, which, especially of late years, has excited a great deal of discussion, viz., whether there is more than one syphilitic virus. Daily experience shows that the effects of the syphilitic poison are not always the same; that if two men contract chancres, the sore may heal in one, and the man experience no further annoyance, while, in the other, the chancre will be followed by constitutional effects, which may be perpetuated through life and be even transmitted to his offspring. To what is this difference due; to a different constitution in the two persons, or a difference in the virus which produced the sores? And here we have the "question of the unity or duality of syphilis," as it is called. Now the history of syphilis has been brought to bear upon this question also, and let us see what is known about it.

But not to excite expectations that it is beyond my power to fulfill, I must tell you, at the outset, that the ancient history of venereal is involved in much doubt and obscurity. There are only a few points which are satisfactorily ascertained beyond question, and I shall confine myself in the main to these, since here—as throughout this whole course of lectures—I desire to impart to you what is known and certain, rather than waste time on what is vague and undetermined.

With regard to the ancient history of venereal, this fact is certain, that gonorrhœal affections were common among the oldest nations of the world. Clear descriptions of them are given in Arabic, Greek and Latin works on medicine, and even in the Mosaic books of the Bible. In the 15th chapter of Leviticus, Moses is evidently referring to gonorrhœa, when he speaks of "a running issue out of the flesh;" and the rules which he lays down for the observance of *those* afflicted with it, are exceedingly strict—more so, indeed, than, with the light we now possess, is necessary or desirable. That evidence of the existence of gonorrhœa should thus be found in the early history of the world, is what we might expect from our modern views of the nature of this disease. Though there are still some persons who dissent from this opinion, yet it appears to me to be established beyond a doubt, that gonorrhœa is a simple inflammation, independent of any specific virus; that it may be produced by any of the causes which excite inflammation in other tissues of the body, and that it is met with wherever intercourse is promiscuous and frequent. We should, therefore, expect that gonorrhœa would be as ancient as prostitution, and this can be traced back to the earliest times of which we have any record.

Passing from gonorrhœa to syphilis, we find our knowledge much less perfect. Ancient authors do indeed describe ulcerations of the genital organs, and also abscesses in the groins, or buboes; but we search in vain for any clear account of constitutional syphilitic symptoms. If such existed in those days, they were confounded with other diseases, and were not traced to their primary cause. You will find, however, that authorities differ on this point, some asserting that evidence of the existence of constitutional syphilis can be unravelled from the crude descriptions of disease given by ancient medical authors, and others adopting the opinion, which I believe to be the correct one, that we have no evidence of the existence of true syphilis in ancient times, and that it is, in all probability, of modern origin. In other words, the venereal sore which I shall describe to you in a future lecture, as the simple or non-infecting chancre—and which is always a mere local disease, has existed in all ages of the world; while the true syphilitic sore or infecting chancre, and the constitutional symptoms to which it gives rise, have existed for less than four centuries.

If we now come down to the latter part of the 15th century, we shall find the first unmistakable accounts of the existence of lues venerea. It was at this period, that a fearful epidemic broke out in Italy, and thence extended over Europe. This is known as the Italian Epidemic, and is constantly referred to by writers on syphilis. The novelty of the disease to medical men of that time, and their ignorance of its pathology and treatment, are additional reasons for supposing that it was not known before to the civilized world.

The exact date of the first appearance of this epidemic is somewhat uncertain. Some authorities place it as far back as 1483; others state that it made its first appearance in 1493 or '94, at the time that a great war was waging in Italy. In this war three great nations were engaged; the French, Spaniards and Italians. In the year 1493, Charles VIII., King of France, marched into Italy with a large army to recover the Kingdom of Naples, which he claimed as his by inheritance. Ferdinand, King of Spain, of Ferdinand and Isabella memory, at this time held Sicily as part of his possessions; and, being jealous of the near approach of the French, crossed from Sicily over to Italy, together with Gonsalvo de Cordova, the great captain, and a large army, to oppose the progress of the French and aid the Neapolitans. This epidemic devastated these various armies collected on Italian soil, and on their return home, was spread throughout Europe.

I have before me a copy of a translation of Astruc's "Treatise of Venereal Diseases," published in London, in 1754. This author quotes from Jerome Fracastorius, who wrote in 1546, and who derived his knowledge from eye-witnesses of this epidemic, the following account of its symptoms: "The patient was low-spirited, complained of weariness and had a pale look; at last, for the most part, little ulcers appeared about the pudenda, which were extremely obstinate, and after they were cured in one part, broke out afresh in another. Afterward a kind of crusty pustules appeared upon the skin, beginning in some upon the scalp (which was most frequently the case), and upon other parts in others. Of these scabs there were several different kinds, some of them small and dry, others large and moist; some of a livid color, some of a palish white, and some hard and reddish. All of them opened in a few days, and discharged a thick fetid matter, nor can it be expressed what quantity of that matter perpetually discharged, or how nasty in its quality. Afterward the ulcerated parts became eroded, in the same manner as those ulcers which are called phagedænic, and sometimes they infected not only the flesh, but likewise the very bones. When it attacked the head chiefly, it produced acrid rheums, which eroded sometimes the palate, sometimes the uvula, sometimes the jaws and tonsils; in some it destroyed the lips, in others the nose, in others the eyes, and in others the whole *pudenda.* Besides this, in a great many, the limbs were greatly deformed with gummy tumors, which frequently grew to the size of an egg, or a small loaf; and being laid open, discharged a white mucilaginous matter. But beside all the above-mentioned symptoms, as if they were only trifling, there happened violent pains of the arms, very obstinate and lasting, and excessively tormenting. They were most violent in the night, and the pain was not properly in the joints, but in the muscles and nerves. In the meantime all the limbs became feeble, and the body emaciated, the appetite quite lost; the patient had no sleep, but was either melancholy, or very passionate, with a strong inclination to lying in bed. His face and legs swelled; sometimes, though rarely, the disease was attended with a slight fever, some had a pain in the head, which was lasting, and not to be subdued by any medicines."

Such is the description of this epidemic given by eye-witnesses, and you will notice the correspondence of the symptoms with those of syphilis. Indeed, there can be no doubt but it was syphilis, either alone or combined with some other disease, which produced these fearful ravages. Still the severity of the symptoms far exceeded what is ordinarily met with at the present day, the contagious power of the disease was apparently greater, and the general constitution was more frequently involved. These facts have led some modern authors to question whether some other disease was not combined with syphilis in this epidemic, and Ricord is inclined to believe that glanders, a disease contracted from horses, had some part in its production. Some plausibility for this supposition has been found in a work on glanders, written by Lafosse, and published in Paris, in 1749. This author states that glanders was unknown to the ancients, and was first observed at the siege of Naples, in 1494.* This explanation of the character of this epidemic is an ingenious one, but I hardly think that it is necessary, and it is certainly devoid of absolute proof. Recent investigations in syphilization have shown that the syphilitic poison varies in intensity, and that it is especially destructive when brought from a distance, or when it attacks natives of a colder climate, sojourning for a time in countries bordering on the tropics. The fearful ravages of syphilis among the invading armies in the Peninsular war is an instance in point. May we not explain the severity of the Italian epidemic in a similar manner, especially if we make allowance for the exaggerations which would naturally be introduced into the descriptions of it by the invasion of a disease so new and so terrible?

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* "Lettres sur la Syphilis," 2d ed., p. 136.

But you will ask: "From whence did the Italian epidemic spring? Did the disease exist in Italy, before the invasion of these armies, or was it imported there at this time?" In reply, I would say, I cannot tell; its origin is unknown. There is, however, a supposition, though as you will see, a very improbable one, which is deserving of mention. You will observe that this epidemic arose about the time that Columbus returned from his first voyage to America, and it is probable that some of his soldiers or marines joined the army under Gonsalvo, and found their way into Italy. Now, as early as 1525, the idea was suggested that these soldiers had contracted syphilis in America, and were the means of conveying it to the contending armies in Italy; and you will find that discussions relative to this point occupy a large space in the literature of syphilis. But it is only necessary to mention two arguments against this supposition to show that it is very far from being probable. The first is that we have tolerably clear evidence of the existence of syphilis in Italy, a year or two prior to the date at which Columbus landed. The second is that those ports at which he touched on his return, and which would be most likely to be contaminated by any infection existing among his crew, were entirely exempt from the disease. We must, therefore, I think, dismiss this conjecture as untenable, and confess our ignorance of the origin of this disease, which was first known to the civilized world in the Italian epidemic, and which has ever since been one of the greatest banes of humanity.

The prevailing ideas with regard to syphilis for many years after the Italian epidemic were very vague, and the knowledge of its symptoms and modes of communication imperfect. It was supposed that it could be communicated by contact with the clothes of an infected person, or even by inhaling the air that he had breathed. Henry VIII. King of England, in 1529, accused Cardinal Wolsey, of endeavoring to infect his royal person by whispering in his ear at the confessional.

You will not expect me to enter into any detailed account of the views of the different authors who wrote on syphilis, during the three centuries which elapsed between the Italian epidemic and the commencement of the present. A careful examination of their writings shows that many of them entertained ideas which coincide with those that prevail at the present day, to a greater extent than is commonly supposed.* Thus, Fernel, physician to Henry II. of France, a man of great genius, as early as 1546, traced the order between the different stages of syphilis with a fidelity and accuracy remarkable in that age. Thierry de Herry also, in 1552, divided venereal diseases into virulent, and non-virulent or catarrhal. But the light shed upon this difficult subject by these and other eminent men was lost in the general darkness that prevailed. Gonorrhœa and syphilis were confounded, and the one supposed to be capable of giving rise to the other, even by Astruc and John Hunter, who wrote in the last century. The modes of communication of syphilis and the order in which its symptoms appear, were very imperfectly understood. The method of examination of cases was also very loose and defective. It was reserved for the present century, a century remarkable for its progress in all departments of science, to make equal advance in the knowledge of the nature and symptoms of venereal, and to substitute careful observation and rigid experimental inquiry in the place of theories and conjectures.

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* See an interesting series of articles by Ed. Langlebert, in the *Union Médicale*, 1855, entitled: "Recherches historiques sur la doctrine moderne des maladies vénériennes."

The man who has contributed most to this advance in our knowledge of venereal, and who first pointed out the defects of the old system, and introduced modes of inquiry and experiment, which in his hands and others have already produced glorious results, and are yet to produce greater, is a native of our own country. And as the name of Ricord is intimately connected with all that relates to venereal, and will be frequently referred to in these lectures, some account of his life and professional career may be acceptable to you.

"Philip Ricord was born at Baltimore, on the 11th of December, 1800. His parents were French, and educated their sons in the view of their residing in France. At a very early age, young Ricord developed a decided taste for the study of natural history, and made several voyages with his brother Alexander to South America and Columbia, for the purpose of collecting specimens, many of the most rare and valuable of which are now deposited in the museum at the Garden of Plants at Paris. He commenced the study of medicine at Philadelphia, in 1819, but was shortly obliged to suspend his course, in consequence of receiving an appointment from the French ambassador, to prepare and take charge of some specimens of natural history which he was about to transmit to Paris.

"Having made his arrangements, Ricord left this country, and arrived in France in 1820, bearing strong letters of recommendation to the celebrated Baron Cuvier.

"Soon after his arrival in Paris, he received an appointment as an assistant in the military hospital of Val-de-Grace, and shortly afterward succeeded in gaining entrance into the civil hospitals as Interne, in which capacity he was attached to the service of Dupuytren, at the Hôtel-Dieu. He passed his examination and obtained his degree in June, 1826. In 1828, he was appointed Surgeon to the 'Bureau Central,' and in 1831 was directed to take charge of the surgical wards at the Hôpital du Midi, where he has continued ever since.

"From the period of his appointment to the Venereal Hospital of Paris, Ricord has devoted the greater part of his time and attention to the study of venereal diseases, although he has not neglected general surgery and has introduced important modifications of several surgical operations." *

In order better to appreciate what Ricord has accomplished, let us

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* "The Hospitals and Surgeons of Paris," by F. Campbell Stewart, M.D., Philadelphia, 1843.

compare our present knowledge and our present means of investigation, with those of thirty years ago. At the time that Ricord took charge of the Hôpital du Midi, what, for instance, was the method of examining a woman, who was suspected of having primary syphilis? She was seated upon the edge of a chair, with her thighs apart, and the vulva and all of the vagina, that could be exposed by separating the labia, was inspected. If no chancre was apparent on this examination, she was supposed to be free from primary syphilis. As Ricord wittily remarks in his lectures, "the labia minora were looked upon as the Pillars of Hercules, beyond which no mortal dared venture." But how large a mucous surface, subject to syphilitic ulcerations, did this superficial examination leave unexplored! Is it to be wondered at that a discharge, excited and kept up by a chancre deeply seated in the vagina or on the os uteri, was often mistaken for a simple gonorrhœa, and false inferences deduced as to the power of a clap to give rise to syphilis?

Récamier, at this time, had already revived the use of the speculum, but it had not been applied to the diagnosis of venereal diseases. Indeed the presence of any venereal affection was generally considered as a contra-indication to its employment. Ricord, however, had the foresight to perceive what light the use of this instrument would throw upon many questions still involved in obscurity. He introduced it at once into the hospital under his charge; all the female syphilitic patients were examined by it, and thus an invaluable addition was made to our means of diagnosis of venereal diseases, which was at once generally received and adopted by the profession.

But in addition to this improvement introduced by Ricord, there was another of no less importance, which was first insisted upon by him as it deserved. The fact had long been known that chancres might arise on any part of the body, or within any opening of the mucous canals, within reach of the application of the syphilitic virus, but this was too often forgotten in the examination of patients. The idea, that still prevails with the public, that the genital organs have an exclusive right and title to primary venereal manifestations, very generally prevented a thorough search being made over all parts of the body accessible to direct observation. In this way, many chancres situated upon the fingers, upon the lips, upon the breasts, at the margin of the anus, within the rectum, urethra and mouth, or elsewhere, were entirely overlooked, and false conclusions often drawn as to the origin of constitutional syphilis.

For the generalization of inoculation, as a means of diagnosis, we are also indebted to Ricord. Experimental inoculations had, indeed, been practised before his time by Bru, Hernandez, Hunter, etc.; but where these surgeons performed them by tens, Ricord performed them by thousands—while these surgeons limited them to the determination of one doubtful point, Ricord extended them to throw light upon all questions of interest connected with venereal. By means of artificial inoculation, Ricord placed the distinct nature of gonorrhœa and syphilis beyond a doubt—a fact, which up to this time, had not been clearly settled. He thus, too, was enabled to establish the existence of a syphilitic virus and the contagious character of virulent buboes. These, gentlemen, are but some of the gifts, for which we are indebted to Ricord.*

Do not forget them, when you hear him assailed by opponents, who are often disposed to treat him uncourteously and unjustly, who often represent him unfairly, and who are wont to compare his early opinions, long since publicly abandoned, with his recent views, and, by such a course, which it is unnecessary for me to stigmatize, to convict him of inconsistency. If you find that some of his earlier opinions, which he expressed in the form of "laws." are not so immutable as he once believed them to be, make some allowance for the ardor of an enthusiast; do justice to the frankness which has led him to modify his opinions as his experience and knowledge have increased; do not be easily led to throw aside as valueless the knowledge acquired during the last half century out of a mere spirit of partisanship, and respect and honor the man who has introduced a precision and accuracy in our diagnosis of venereal cases—at present so generally adopted, that we are likely to forget the source from which they came—and on which we must rely for our future advance in the knowledge of this subject.

This short sketch of the history of venereal, requires some account of the modern doctrines and practice of syphilization, to render it complete; but this subject will be more intelligible to you at a later period of our course, and I propose to defer it till then, when it will be considered in connection with other points, of less practical importance than those that will first engage our attention.

Gentlemen, there is no subject connected with medicine or surgery, upon which there is a greater dissonance of opinion than upon syphilis; none in which you will be called upon to exercise more judgment and discrimination in forming your conclusions. It would appear as if that vague cloud of uncertainty which fills the mind of a venereal patient with dim phantoms, had not wholly spared the medical mind, when called upon to investigate this subject. The most improbable theories are often received as facts. The necessary analysis of cases is often ignored. Distinct affections are confounded under one head, and an immense amount of time and labor wasted in the attempt to determine whether this treatment or that is best adapted to them! The philosophic method of inquiry which has contributed so much to the present century, cannot be laid aside in this, any more than in other branches of knowledge. Through it alone, is any advance to be expected.

I cannot anticipate, amid so many conflicting opinions, to be always so fortunate as to select the right one. I can only promise you to do my best, and, avoiding as much as possible discussion on points which are yet undetermined, convey to you such information as I believe to be fixed and settled.

See the "Traité Pratique des Maladies Vénériennes," by MM. Maisonneuve and Montanier, p. 9 et seq.

Lecture II.

Gonorrhœa—Synonyms of—Varieties of—Urethral Gonorrhœa in the Male, its Causes and Symptoms.

Gentlemen: We may define venereal diseases as those affections which have their origin directly in sexual intercourse. They are chiefly two in number—gonorrhœa and syphilis. For more than three centuries after the Italian epidemic, these diseases were generally regarded as identical, both in their nature and in the treatment which they require. It is now clearly proved, however, that they are entirely distinct, and that they have nothing in common independently of the act in which they originate. Gonorrhœa, uncomplicated with a chancre, can never give rise to syphilis in any form; the secretions of syphilitic ulcerations can produce a gonorrhœa, only when they act as common irritants.

A contrary opinion is, indeed, still maintained by some few authorities; but if you inquire of such men what their practice is, you will find that they always treat gonorrhœa as a simple inflammation. In practice, therefore, all agree that these two diseases are distinct; and the proof that this distinction is radical and absolute is now, I believe, too great to admit of a doubt.

Gonorrhœa.—By far the more frequent venereal disease is an affection of certain of the mucous membranes, a prominent symptom of which is a secretion or discharge from the diseased surface. At different times and in different places, this disease has received different names, founded on the prevailing ideas as to the nature of this secretion. At an early period in the history of venereal, it was supposed to consist of semen, and hence the disease was called gonorrhœa, from *γονη*, sperm, and *ῥεω*, to flow. This name is still in use among American and English writers, in spite of the erroneous supposition in which it originated. The French call the same disease *blennorrhagie*, which means a flow of mucus; a name which is also erroneous, since the discharge does not consist of mucus alone, but of a mixture of mucus with pus. In popular language, it is termed clap by the English, and *chaude-pisse* by the French.

The chief, if not the only mucous membranes, subject to gonorrhœa, are those lining the genital organs in the two sexes, and the conjunctiva oculi. Gonorrhœa of the anus, mouth, nose and external ear are, indeed, mentioned by authors, but the existence of all of them is more or less doubtful. Perhaps there is the least question in admitting gonorrhœa of the anus, though the disease is said to be rare even in countries where unnatural practices are frequent; but we can hardly admit under this head, those cases in which the anus is simply excoriated by the discharge flowing from the urethra or vulva, without extension of the disease to the rectum.

Reported cases of gonorrhœa of the mouth, nose and external ear are very few in number, and are all open to serious question; as, for instance, the supposed case of gonorrhœa of the nose, reported by Mr. Edwards, in the London *Lancet*, American edition, June, 1857, in which it is very doubtful whether the disease was of this origin and not a simple catarrhal affection. M. Diday reports some experiments bearing on this point, though we are surprised, in reading them, that any surgeon should presume to make them, or any patient submit to them. M. Diday says: "Frequently (eight or ten times at least), for the purpose of experiment, I have moistened the end of my finger in the urethral discharge of patients with gonorrhœa, when the disease was in its most acute stage, applied it within their nostrils and rubbed it into the nasal mucous membrane, and there has never resulted the slightest degree of inflammation in the part."—*Annuaire de la syphilis, année* 1858.

But when we recollect how frequently a disregard of cleanliness must cause the application of gonorrhœal matter to the nostrils and lips, and how readily such applications excite inflammation of the ocular conjunctiva, the great rarity of suspected cases of nasal and buccal gonorrhœa must convince us, without the necessity of such experiments as these, that certain mucous membranes are more apt to contract gonorrhœa than others; and in this we may find an analogy to an extraordinary fact which has recently excited much attention, viz., that all parts of the body are not equally susceptible of the two varieties of chancre; the soft chancre never being met with upon the head or face, although it may be implanted there by artificial inoculation. The reason of this preference of these diseases for certain localities escapes us, but they are not the only instances of the kind to be met with.

The symptoms and the treatment of gonorrhœa vary according as the disease exists in the male or female, and according also to the portion of the mucous membrane lining the genital organs which it attacks; it will be convenient, therefore, to consider this affection under corresponding heads.

URETHRAL GONORRHŒA IN THE MALE.

Men are more liable to contract gonorrhœa than women; and of a given number of cases of the disease in the former, in a large proportion you will find that it is the urethra which is affected. Cases of urethral discharge in the male outnumber all the other forms of gonorrhœa in the two sexes combined. The greater frequency of this disease in the male sex is explained by an examination of the causes which produce gonorrhœa, from which it appears that it is not necessary for one person to have a discharge of venereal origin to communicate such a discharge to a second person by cohabitation; any acrid discharge from the genital organs is sufficient to produce it. Now, men rarely have such discharges independently of contagion, while in women, the menstrual flow, leucorrhœa or the normal secretions of the vagina, are often sufficiently irritating to excite an attack of gonorrhœa in men who have intercourse with them. In short, a man rarely communicates gonorrhœa to a woman, unless he has it himself; while, strange as it may appear, most women who communicate gonorrhœa to men, do so without having it.

If, when the opportunity offers, you will examine the genital organs of women who have given gonorrhœa to your male patients, you will be surprised to find in how many of them there is but little to account for its origin. In the great majority of cases, a vaginal examination will reveal the existence of only a small amount of leucorrhœa; and the previous history of the woman will show that this is not the termination of a preceding attack of vaginal gonorrhœa. In some cases, also, you will find absolutely nothing to explain the origin of the disease in the male. The genital organs will be entirely free from discharge, and present in all respects the aspect of health. Further inquiry into the history of the case may throw light upon it, by showing that at the time of sexual congress, one or both persons were heated with wine, the woman had her menses upon her, or the act was frequently performed; for all these causes are sufficient to excite urethral inflammation, especially in men who are predisposed to it. In the absence of any apparent exciting cause in the female, we are forced to suppose the existence of an acrid character in the secretions of her genital organs, aided by a peculiar susceptibility in the male to affections of this nature.

Before examining women in such cases as we are now considering, it is important to satisfy ourselves that they have not passed their urine nor used injections, nor even bathed the parts for several hours previous, lest all traces of a discharge may temporarily have been removed; and particular attention should be paid to the condition of the urethra, for reasons which will be evident when we come to speak of gonorrhœa in women. The following cases will illustrate the remarks already made on this subject.

Case 1.—The first case that called my attention to the possibility of a urethral discharge arising in the male, from intercourse with a woman not affected with gonorrhœa, occurred while I was in Paris. A fellow-student had been living with a mistress for nine months, when he found himself attacked with all the symptoms of gonorrhœa. He had had connection with no other woman, and accused his "friend" of having been false to him, and of having contracted a disease which she had communicated to him. She indignantly denied the charge. He examined her by means of the speculum and could discover nothing abnormal. Not satisfied with this, however, he had her examined by Ricord's Interne, at the Hôpital du Midi, who equally failed to discover anything whatever to account for his disease. He continued to suffer from a urethral discharge for about six weeks.

Case 2.—A gentleman whom we will call Mr. B. applied to me one Thursday in the fall of 1852, with all the symptoms of a commencing gonorrhœa. I had known him for several years, and could place implicit reliance on his statements. He told me what indeed I knew before, that he had had an attack of gonorrhœa two years before, and none since that time. For the preceding three months he had been in the habit of having connection with a certain woman of the town, twice a week, and with no other. His last connection was three days before. At his request I examined this woman, and found no inflammation of the urethra nor of the vagina, and simply a transparent jelly-like secretion from the os uteri. I treated my patient by the abortive method. By the following Monday, he was free from all discharge, had connection with the same woman that day, and continued his intercourse with her for two months afterward without any recurrence of his symptoms.

Case 3.—Mrs. M. had been the kept mistress of a man for six years. Mr C., the man who kept her, had but little sexual power, had been subject in former years to frequent seminal emissions, and before his present alliance had suffered from gleet for eighteen months. Mrs. M. had been under my care for congestion of the os uteri, and uterine appendages, and had slight uterine leucorrhœa. Mr. C. was absent from the city for several weeks. The day that he returned Mrs. M. was just recovering from a menstrual period, which did not prevent his having intercourse with her. Three days after he was attacked with gonorrhœa, which lasted two months. I examined Mrs. M. after this occurrence, and could discover no increase of the symptoms which I knew she had had for several months. It so happened that Mrs. M., in addition to Mr. C., had a friend, Mr. F. This man had had connection with Mrs. M. once or twice a week for the last six weeks, and continued to do so after Mr. C. was infected; yet he suffered no inconvenience, though he took no precautions to avert contagion.

These cases are sufficient to illustrate the frequent origin of gonorrhœa in the male from simple causes, and many more might be added to them. The cases of which I have notes, or which are still fresh in my memory, and in which I have felt absolutely sure that I was examining the identical woman from whom my patient contracted his disease, now amount to twenty; and in only one of these women have I found acute vaginitis or urethritis. It should be stated, however, that these observations have all of them been made upon kept women, or the better class of prostitutes; among the lower classes the proportion of cases of simple origin would probably be much smaller.

These views with regard to the origin of gonorrhœa in the male, are confirmed by many observers, and especially by Ricord. This author says in the third of his *Lettres sur la syphilis*: "Frequently the menstrual fluid appears to have been the only cause of the disease; and in very many cases, we can ascertain no cause at all, or can ascribe it only to imprudence in diet, fatigue, excessive sexual congress, the use of certain drinks, such as beer, or certain articles of food, as asparagus. It is often the case that women free from gonorrhœa give this disease to men." Again, in his notes to Hunter, he says, "I can assert without fear of contradiction, that women give one hundred claps where they receive one."

The bearing of these facts upon the question as to the nature of gonorrhœa is evident, since they clearly exclude the idea of a specific virus. Their importance, when deciding on the character of persons whose morality is called in question, is also obvious. But, it may be asked, if this be true, why do not men acquire gonorrhœa from intercourse with their wives? I reply that such cases do occur, especially among newly married persons, by whom the conjugal act is apt to be indulged in to excess, or during the menstrual period; and it is in such cases as these, that upon the decision of their medical adviser, the reputation and happiness of those committed to his charge will often depend. That gonorrhœa does not more frequently occur in married life, is in accordance with a law established by nature, that intercourse limited between one man and woman, carries with it a certain degree of immunity. As Ricord expresses it: *acclimation* is acquired. Hence it often happens that a man who is habitually living with a woman may be free from disease, while she may excite a gonorrhœa in another man, who has connection with her for the first time.

Case 4.—A gentleman of this city, six weeks after his marriage, applied to his family physician to be treated for gonorrhœa. He declared most positively that he had not been faithless to his wife, and his character was such as to render his statement probable. Supposing that his disease could only have arisen from contagion, he had already accused his wife of infidelity, and now threatened to procure a divorce. His physician pacified him, and, on examining the wife, found her to be perfectly sound. Further inquiry explained the case by showing that intercourse had been continued during a menstrual period.

The following case is reported in a work entitled, "*Sur la non-existence de la maladie vénérienne*," which was published in Paris in 1812.*

Case 5.—A young man was married to a young woman after several years of mutual attachment. Some months after marriage, the husband was obliged to take a journey to a distance. While travelling he experienced pain in passing water, and soon after discovered a discharge from the urethra. On arriving at his journey's end, he consulted an eminent surgeon, who told him that he had the gonorrhœa. "But," said the man, "I am but lately married, and have never known any other woman but my wife in my life." The surgeon laughed at him, told him he had heard such stories before, and assured him he had a genuine clap; still he protested his innocence. Some days after his testicle swelled. The surgeon now told him that either his wife was not virtuous, or that he must have had connection with another woman, and that the "pox was now in his blood." Confident of his own purity, he took the other alternative and condemned his wife. He wrote her an indignant letter, took a pistol and blew out his brains. The unfortunate woman, on receiving his letter, submitted to an examination, which proved her to be free from disease, shortly after miscarried, and died. So much for the honor of our noble profession.

A gouty or rheumatic diathesis sometimes gives rise to gonorrhœa, especially in old men, and this independently of sexual intercourse. I have never met with an undoubted case of this character, but unquestionable instances of it are reported by various authors, and the possibility of such occurring should not be forgotten. Among other alleged causes of gonorrhœa, we find, the use of bougies, masturbation, prolonged excitement of the genital organs, ascarides in the rectum, the influence of dentition and even epidemic influences. M. Latour, editor of the *Union Médicale*, the French medical journal in which

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* I have copied this case, with some abridgment, from the lectures of Mr. Skey, *London Medical Gazette*, 1839.

Ricord's letters on syphilis first appeared, vouches for the truth of the following case:

Case 6.—A physician, thirty years of age, had been continent for more than six weeks, when he passed an entire day in the presence of a woman whose virtue he vainly attempted to overcome, but who resisted all his approaches. From ten o'clock in the morning until seven in the evening, his genital organs were in a constant state of excitement. Three days afterward he was seized with a very severe attack of gonorrhœa, which lasted for forty days.

Enough has been said to show that gonorrhœa is not always dependent upon impure connection. I have dwelt somewhat at length upon this point, because I believe it to be of great practical importance and not sufficiently insisted on in most works on venereal. You may inquire whether a case of gonorrhœa arising in this way differs in its course and symptoms from one which is due to direct contagion. I reply that, as a general rule, I believe it will be more amenable to treatment; but this is far from being invariably the case. The disease may continue for months, and be attended with inflammation of the testicle, or any other complication of urethral gonorrhœa. Some of the most obstinate cases of gonorrhœa that I ever had to treat, proceeded from connection with women who had simple leucorrhœa.

You will observe that I have omitted all mention of a specific origin of gonorrhœa, yet you will frequently meet with the statement in works on venereal, that the syphilitic virus, in virtue of its specific character, may, by contact with the mucous membrane of the genital organs, excite a discharge, which in such cases is a form of primary syphilis; or that the same virus, after constitutional infection, may produce a running as a constitutional or secondary effect. This assertion is entirely untenable. The experiments of Ricord and others have demonstrated that the discharge from a mucous surface, free from ulceration, never possesses the power of producing a chancre on inoculation, which would be the case if gonorrhœa and syphilis were convertible. Virulent pus can produce a discharge from a sound mucous surface only when it acts like any ordinary irritant, and constitutional infection can predispose to gonorrhœal discharges only by depressing the vital powers, or excite such discharges through the irritation set up by secondary eruptions situated on the mucous membranes. In connection with this subject it is important to recollect the occasional occurrence of urethral chancres which produce a discharge from the canal liable to be mistaken for a simple gonorrhœa; but of this more hereafter.

Symptoms.—We come now to speak of the symptoms of urethral gonorrhœa in the male. These first show themselves, as a general rule, between the second and fifth day after exposure. In exceptional cases they appear as late as the seventh or tenth day, but their supposed occurrence after this time, as stated by some persons, is, I believe, due to the case not having been carefully observed from the outset. At first, the symptoms are very slight, consisting only of an uneasy or tickling sensation at the mouth of the canal, which on examination is found to be more florid than natural and to be moistened with a small quantity of colorless and viscid fluid, which glues the lips of the meatus together. This moisture of the canal gradually increases in amount, until on pressure a drop may be made to appear at the orifice. At the same time it begins to lose its clear, watery appearance, and assumes a milky hue. Examined under the microscope, it is found to consist of mucus with the addition of pus globules; the number of the latter being proportioned to the depth of color of the discharge. Meanwhile, some smarting in the anterior portion of the canal during the passing of the urine is felt by the patient.

Such are the symptoms of the early stage of gonorrhœa. The exciting cause of the disease has been applied to that portion of the canal which lies near the orifice of the meatus and which was chiefly exposed to contagion, and the ensuing inflammation is gradually lighted up in this part, and has not yet extended beyond that portion of the urethra known as the fossa navicularis. This early stage of gonorrhœa is often called the stage of incubation. This name is objectionable because the inflammatory process is doubtless set up at the time of the application of the exciting cause. Time is required for it to produce its full effect, and the earliest symptoms are slowly and gradually ushered in. A more appropriate name is the first or preparatory stage. It is important to recollect the symptoms of this stage and the fact that the disease is as yet confined to the external portion of the urethra, since, as we shall see hereafter, a more rapid method of cure may now be resorted to than is admissible in the subsequent stages.

The first stage of gonorrhœa usually lasts from two to four days. The symptoms gradually increase in intensity, until, in about a week after exposure, the second or inflammatory stage may be said to commence. If we examine the penis during this stage, we find the mucous membrane covering the glans, reddened and with an angry look. The whole extremity of the organ is swollen so that the prepuce fits more tightly than is natural. In some cases the latter is puffed out by œdema in its cellular tissue, and phymosis may exist, rendering it impossible to uncover the glans. The inflammatory blush is especially marked in the neighborhood of the meatus, the lips of which are swollen so as to contract the calibre of the orifice. The discharge has now become copious, so much so in some instances as to drop from the meatus as the patient stands before you. It is thick, of a yellowish cream color, and not unfrequently tinged with green. This greenish hue is due to the admixture of blood corpuscles, as is the case with the sputa in pneumonia, and the corpuscles may be sufficiently numerous to produce the characteristic color of blood. The penis generally, and especially upon its under surface over the course of the canal, is sensitive and tender on pressure.

The patient complains of intense pain while passing his urine, and this is not confined to the anterior part of the canal, but is now felt in all that portion of the organ anterior to the scrotum, or is even more deeply seated. The severity of the suffering during this act is in some instances very great. The pain is compared to the sensation of a hot iron introduced within the canal, and the popular name, *chaude-pisse,* given to the disease by the French, is fully justified. This pain is excited in part by the irritation produced upon an abnormally sensitive membrane by the salts contained in the urine, but chiefly, I am inclined to think, by the distension of the contracted and sensitive canal by the passage of the stream. Hence, during the act, the patient involuntarily relaxes the abdominal walls, forces the air from his lungs, and keeps the diaphragm elevated, in order to diminish the pressure upon the bladder and lessen the size and force of the stream of urine. In consequence also of the urethra being contracted and more or less obstructed by the discharge, the stream is often forked or otherwise irregular.

Another source of suffering in this stage of gonorrhœa is the nocturnal erections, which are apt to come on after the patient is warm in bed. The disease has rendered the genital organs highly sensitive, and they are readily excited by lascivious dreams and the contact of the bed clothes; or, independently of such exciting cause, they assume a state of erection which in health is more apt to occur during sleep. When thus excited, it will often be found that the penis is bent in the form of an arc with its concavity downward. This condition is known as chordee. Its explanation is very simple. The urethra, the chief seat of the inflammation, runs along the under surface of the penis. Plastic lymph is effused around this canal, gluing the tissues together and rendering this portion of the penis less extensible than the remaining portion composed of the corpora cavernosa. Hence, in a state of erection, the corpus spongiosum surrounding the urethra, not being able to yield to the distension, acts like the string of a bow, and chordee is produced. The stretching of the parts thus adhering together excites pain, which is often very severe. The sufferer, awaking from sleep, instinctively grasps the penis in his hand, and bends it in a still smaller curve, so as to remove the strain from the under surface and thus ease the pain. It not unfrequently happens that during one of these attacks of chordee, the mucous membrane of the urethra becomes lacerated and hemorrhage takes place from the canal. In this way nature may produce local depletion, and, if the flow be not excessive, the effect is often beneficial.

The above explanation of the mechanism of chordee is the one usually received, though it is proper to state that it is rejected by Mr. Milton, who believes that chordee is due to spasm of the muscular fibres, which Mr. Kölliker and Mr. Hancock have shown to exist around the whole course of the urethra (Milton on Gonorrhœa, p. 75.) I am not convinced that the generally received opinion should thus be laid aside, though it is highly probable that spasmodic muscular action plays some part in the production of the frequent erections and chordee which take place in gonorrhœa.

During the inflammatory stage of gonorrhœa abscesses sometimes form in the sub-cutaneous cellular tissue over the urethra. I have never met with them except anteriorly to the scrotum, but authors state that they sometimes occur in the perineum. If left to themselves and not opened early, there is danger of their breaking externally and also internally into the canal, thus giving rise to a urinary fistula.

It is also chiefly during the second stage of gonorrhœa that buboes are met with, if they occur at all; for they are rare compared with the number of patients afflicted with this disease. They are at once recognized by the physician and patient by the enlargement and tenderness of a single gland in the groin, occasioning considerable pain and uneasiness in walking and standing. Buboes attendant upon gonorrhœa, uncomplicated with chancre, are sympathetic buboes; and a fuller description of them will be given hereafter when speaking of buboes in general. They may generally be made to disappear in a few days by keeping the patient quiet and producing a little counter-irritation by painting the skin over them daily with tincture of iodine.

Do gonorrhœal buboes ever suppurate? It is generally admitted that they may in rare instances, "in persons disposed to glandular engorgements, in consequence of a lymphatic temperament or a scrofulous diathesis" (Ricord, Notes to Hunter); though so high an authority as Diday states that he "does not believe in the existence of a bubo susceptible of suppuration, produced by gonorrhœa" ("Nouvelles Doctrines sur la syphilis," p. 187). I have met with several instances of suppurating buboes coexistent with gonorrhœa, and apparently dependent upon it alone, but it has so happened that in all these cases the patient was not under my observation during the early stage of his disease, and I could not be certain that he had not had a chancre. Admitting, however, that gonorrhœal buboes may suppurate, of one thing you may be certain, viz., that the pus from them is never capable of producing a chancre on artificial inoculation.

Inflammation of the lymphatic vessels running along the dorsum of the penis is still another complication of the acute stage of gonorrhœa, and one which is also met with in connection with simple chancres. It is to be carefully distinguished, as we shall see hereafter, from the induration of these vessels which often attends an indurated chancre. "It occupies the same vessels and the same situation, and presents the same forms as the latter; but is distinguished from it in several ways: 1. By its feel, which is like that of an hypertrophied cord, elastic but not cartilaginous. 2. By the fact that the cellular tissue uniting the vessels generally participates in the inflammation, and thus binds together in a large cord the dorsal vein, the lymphatics and the artery, rendering it difficult to distinguish the inflamed lymphatics from the blood vessels. 3. By the pain, generally severe, which it excites, and by the swelling and redness visible over the course of the inflamed vessels, caused by the extension of the inflammation to the skin." * This inflammation of the lymphatics on the dorsum of the penis is said to sometimes give rise to chordee, with the concavity of the arc looking upward.

The second stage of gonorrhœa, which we have now described, is variable in its duration in different subjects. As a general rule, it lasts from one to three weeks, being influenced by the constitution of the individual, his mode of life and the number of his previous attacks. It is succeeded by the third stage or stage of decline. This final stage of acute gonorrhœa is marked by no peculiar symptoms, and is characterized only by the disappearance of the more acute symptoms and a gradual return to a condition of health. The discharge runs through

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* Bassereau: "Affections de la Peau symptomatiques de la Syphilis," p. 160.

the same phases, in an inverse order, which it did at the outset of the attack. It gradually becomes less and less purulent, and finally is almost entirely mucous, before entirely disappearing.

Perhaps the most valuable indication of the ushering in of this stage of gonorrhœa is the marked diminution or entire cessation of the pain in passing water. The painful erections and chordee may continue for some time after the acute inflammation has subsided, since it takes time for the plastic matter effused around the urethra to be absorbed.

We have reason to believe that in the course of an attack of gonorrhœa, the disease gradually extends from the outer to the deeper portions of the canal, and it is in this latter situation that it is prone to lurk for an indefinite period. After the discharge has lasted for several weeks, we may evacuate the whole of the spongy portion of the urethra by pressure from behind forward in front of the scrotum, and then, when no further discharge can be made to appear, we can still produce it by the exercise of similar pressure on the perineum. As we shall see hereafter, the inflammation may even extend to the mucous membrane of the bladder.

The duration of the final stage of gonorrhœa is, as a general rule, longer than either of the preceding. It may be cut short by treatment, but, if left to itself, commonly lasts for weeks or even months. Gonorrhœa is a disease which, independently of treatment, rarely terminates in less than three months.

Thus far I have said nothing of the reaction of this disease upon the general system. This varies greatly in different individuals and in different attacks in the same person. In some rare cases there is considerable febrile excitement during the inflammatory stage, marked by the usual symptoms of headache, dry skin, full pulse, furred tongue, etc. As a general rule, however, there is but little constitutional disturbance, and after the acute symptoms have passed, the tendency of the disease invariably is to depress the general health. This fact should be remembered in the treatment.

A first attack of gonorrhœa is usually more acute than subsequent ones; the latter often being subacute or chronic from the first. They are also more difficult to be influenced by remedies and show a decided tendency to run into a gleet.

Cases of gonorrhœa have been reported, in which it has been said there was no discharge whatever—all the other symptoms of gonorrhœa being present, and the disease following impure coitus. These have been called cases of dry gonorrhœa. I doubt whether there be a total absence of all secretion in these cases throughout their whole course, but can readily conceive of an inflammation of the mucous membrane of the urethra, resembling that of erysipelas upon the skin, in which the secretion is for a time but slight, and incapable of detection except by a careful examination of the urine. As the inflammation subsides, however, I should expect to find distinct traces of a discharge. We have analogous symptoms to these occasionally in inflammations of the pituitary membrane of the nose. You will find two cases of this variety of gonorrhœa reported by Dr. Beadle in the *New York Journal of Medicine and Surgery*, for October, 1840.

SOCIETY REPORTS.

NEW YORK PATHOLOGICAL SOCIETY.

REGULAR MEETING, MARCH 9, 1859; DR. DALTON, PRESIDENT.

Reported for the New York Journal of Medicine,

BY GEORGE F. SHRADY, M.D.

Dissecting aneurism of the aorta.—Dr. Clark presented a specimen and gave the history as follows: The gentleman from whom this heart was taken was a patient of Dr. Van Kleek. I saw him four years ago for the first time. I then learned that he had been ill for three months, previous to which he had enjoyed as good health as other persons of his age, he being sixty-five years old. What he complained of this time was that he was subject to attacks of insensibility, which would come upon him suddenly, and cause him to fall down. So frequent did these attacks become, that his friends would not allow him to go out without an attendant, for fear that he would injure himself by falling. At the time I saw him he kept in the house most of the time, by way of precaution. He complained of a little disturbance of the heart's action. I, with the doctor, had an opportunity of seeing some of these peculiar attacks. The patient would be conversing, when suddenly his speech would cease in the middle of a sentence, in a moment his face would grow pale, his eyes be closed, and his chin drop upon his chest. He would remain in this position for a few seconds, when he would gradually wake up, the color would slowly come to his cheeks, his eyes open, then his head would begin to move, and taking a long, full inspiration, he would resume the position in which he was before the attack, and take up the sentence that had been broken and go on with it as if nothing had happened. These attacks occurred in such a way, and so frequently, that we were enabled to study the phenomena with some precision. Having found already some hypertrophy and valvular murmurs of the heart, I listened during one of these attacks, and would sit by the side of the patient, and with the ear to his chest, listen to his heart for fifteen or twenty minutes at a time while he was engaged in conversation. I would notice that the heart's action would suddenly cease. I would then raise my finger, and Doctor Van Kleek would notice that the fainting paroxysm would commence to show itself, and he would cease his talking, and after an interval of little less than fifteen seconds, *the heart* would commence to beat again. I would then raise my finger to the doctor, when the latter would observe that a little redness would come to the face, the head begin to move, and the patient would slowly wake up. We settled that point to our entire satisfaction.

This particular feature of his disease continued for eleven months, the symptoms of general disease of the heart not rapidly increasing. I saw him about a year before his death, three years after the first visit, with Dr. Van Kleek, when he was suffering from a very harassing cough, considerable dyspnœa and abundant expectoration. The murmurs were then substantially the same as at the first visit. The measurements of the heart at that time were as follows: From the median line along the left third rib, four inches; on the fourth rib, five inches; from median line to apex, four and a half inches, making each of these measurements about an inch more than usual. The cough was so troublesome and the expectoration so abundant, that it was difficult for his non-professional friends to believe that he had not consumption. This profuse bronchorrhœa continued with more or less of dyspnœa till his death.

This latter event occurred in the following manner: About four days ago he suddenly felt a sense of sinking and distress, and called to his wife, who was by, to give him something, quick; she called the doctor, who was in the house at the time, but when he arrived at the chamber he found the patient already unable to speak, with his pulse feeble, and sinking into a kind of collapse. In this state he remained for two hours, when he ceased to breathe.

Autopsy.—At the *post-mortem* examination this heart was obtained. We found that the pericardium was filled with dark-colored fluid, which we judged, through the walls of the membrane, to be blood. We took care to estimate what was the quantity of this blood, and in the next place where it came from. The fluid was removed by sponges and was found to weigh 10 ounces. The clot which was found to equal the fluid blood in quantity was not disturbed until the whole organ was removed. We may say that there was from 20 to 22 ounces of blood in the pericardium. The next step was to find where it came from; there was no very great difficulty in determining that point. We found that there had been a rupture of the internal coat of the aorta, at a point nearly an inch above the aortic valve, and in the immediate neighborhood of this opening were patches of atheromatous deposit. The rupture was about an inch and a half in extent in the circumference of the artery, splitting the layers of the middle coat, passing around the base of the aorta, penetrating all the coats, and escaping through the pericardium by a minute opening scarcely large enough to admit a small-sized probe. The opening was somewhat more than an inch below the original rupture. As regards the cause of the suspension of the heart's action, it is difficult to determine. The heart has undergone fatty degeneration, but not in an extreme degree. The mitral valve is the seat of calcareous deposit on its anterior and posterior margin; the aortic valves are also the seat of the same kind of degeneration.

Now it does not appear after this examination whether this interruption of the heart's action was due to inelastic state of the aorta, to fatty degeneration of the organ, or some undiscovered change in the nerves supplying the organ. The termination of the case was purely an accidental one.

There is another interesting feature in the case, viz., a very extensive calcareous deposit between two folds of the pleura. This plate was about five inches in length, by three and a half to four inches in breadth. The two surfaces of the pleura in that situation were united, and seemed to have been so for a long time. There was no tuberculous disease of the lungs. The attacks of syncope occurred in any position of the body, in the standing, sitting, or recumbent posture. I have seen a good many hearts the seat of fatty degeneration, but never before any one that presented this peculiar symptom.

REGULAR MEETING APRIL 13TH, 1859.

Œdema of glottis from syphilitic ulceration of larynx..—Dr. James, R. Wood presented a specimen of the *larnyx and trachea* of a man sixty years of age, with the following history. About five years ago the patient contracted chancre, which in the course of time was followed by secondary disease of the throat. A few days ago he entered Bellevue Hospital with stridulous breathing, and cough, and all the physical signs of ulceration about the glottis. On Saturday, at my clinic, the House Surgeon called my attention to him. I made an examination and told my class that the patient was suffering from syphilitic disease of the throat with more or less œdema about the glottis. Upon examining the chest, I discovered the physical signs of tubercle. I recommended that he should be placed under treatment, with fumigations of cinnabar, also giving directions that he should not be left alone, as he was liable to die at any moment. The prescription was given repeatedly, but the precaution of close watching was not followed out, for on Sunday morning he took himself to the water closet, suddenly became faint, was carried to the bed, and found to be dead. He died without any warning.

Autopsy.—On making the post-mortem examination, there was found to be a good deal of serous infiltration of the sub-mucous cellular tissue in the neighborhood of the glottis, in the cellular tissue above the epiglottis, and around it ; and also a considerable deposit of lymph. The arytenoid cartilages and mucous membrane in the vicinity were ulcerated. This point was œdematous, hung over the glottis and closed it up.

This case, Mr. President, would have been relieved and probably cured if the operation of tracheotomy had been performed. I have cut into eleven tracheæ for syphilitic disease, and only two died ; the others all recovered. During my first service at Bellevue, the syphilitic patients were under our care ; at that time tracheotomy was looked upon as an almost uniformly successful operation. I recollect two instances where tracheotomy was performed without there being sufficient trouble at the time to warrant it, with the view in the first place of preventing sudden death, and in the second place of allowing the organs to become passive that the treatment might be better carried on.

I believe it is good practice, and that this man might have been saved had the operation been performed.

" *Cranio-tabes.*—Dr. Krakowitzer presented a specimen of cranio-tabes, with the following history: The child from which this specimen was taken was born on the 19th of last September, and I saw it about two days after, when I called on the mother for trouble of the breast. The father is a healthy man; the mother, however, is a little delicate, and very hysterical, otherwise she is quite healthy. The child was never a strong one, always pale, never with a very good digestion, and was brought up by Borden's condensed milk. I saw the child off and on quite frequently; it was generally brought to my office. The main complaint was that the child was very costive, frequently going for three or four days without a passage; as a consequence of this, it would become very restless. I administered simple injections, and occasionally gave rhubarb and magnesia; a passage from the bowels would be the result, and the child would become more quiet again. It adapted itself pretty quick to the artificial nourishment, and grew pretty strong, but never showed that exuberance of animal spirits that is common with children. I saw the child on the 19th of January, when I vaccinated it; the vaccine took its regular course. About three weeks afterward I was called to attend the child, and found her suffering from a moderate amount af catarrhal inflammation, which subsided, under treatment, in a couple of days. At this time I noticed a peculiar conformation of the child's head. There were four well-marked protuberances occupying the anterior thirds of the parietal and the posterior half of the frontal bones, divided by a shallow crucial furrow in the situation of the anterior fontanelle, and taking the direction of the sutures. At the same time there was a marked obliquity of the skull. The posterior aspect of the right side of the head was considerably flattened, as was also the anterior aspect of the opposite side, making one oblique diameter smaller than the other—that is to say, taking the measurement from the ear on the right side obliquely across to the left frontal bone, the distance was much shorter than on the opposite side. The whole head seemed as if it was twisted, the normal diameters being changed in their relation to each other without any diminution of the size of the head as a whole; for, while one part, say the right posterior aspect, was flattened, there was a compensating bulging on that same side anteriorly, and on the opposite side vice versâ.

The existence of this singular conformation of the head led me to make an examination, suspecting it to be a case of *cranio-tabes*. I then found an unnatural yielding of that portion of the skull on the right side posteriorly, immediately in front of the lambdoidal suture. The area of this softening was at that time about an inch in extent. By pressing upon this point, no reflex action was induced, nor did the child seem to suffer much pain. By making a pretty firm and steady pressure on either of the protuberances just described, a mark was produced, which it took some time to obliterate. This pressure obviously caused more pain than the one on the thin part of the skull.

On no other part of the skeleton could any abnormal softening or deviation from the natural shape be detected. The chest was finely formed, and by auscultation and percussion nothing abnormal could be elicited. The child could lie on either side, and seemed to be well nourished, only the skin had a paleness like marble. There was, besides this, a slight puffiness of the feet and hands.

The diagnosis of cranio-tabes of the post part of the skull, with the usual eccentric hyperostitis of the anterior part, being clear, a tonic treatment was commenced. The patient was given the compound syrup of superphosphates ʒss. twice a day, and for nourishment half a pint of Borden's condensed milk, and beef tea, as much as one pound of the best beef would give.

The child took, up to three days before its death, the nourishment very readily, always the whole allowance of milk, and generally the beef tea. Some days, however, the appetite would vary. The sleep was fair, though the child would wake up four or five times of a night, still it would make up for this want of rest by sleeping a considerable part of the day. There was generally only one normal passage of the bowels in twenty-four hours, and it was of a light color.

The urine was examined about the middle of March; only an ounce could be collected in three days, though the normal quantity seemed to be passed. The urine was found to be turbid, and of neutral re-action. On the application of heat, it remained turbid, but cleared up on the addition of nit. acid.

The per centage of inorganic salts was only one quarter of the normal quantity. The symptoms gradually progressed, the softening of the bone alluded to becoming increased in extent. At one or two points on this portion there could be recognized defects in the bony structure by the finger nail; abrupt margins could be detected that seemed as if a small hole existed in the bone.

On the 23d of February, Dr. Jacobi saw the case with me, and corroborated all the facts that I had made out. At that time there was no deficiency of the bony parts of the skull noticeable except the portion referred to in front of the lambdoidal suture.

Dr. Gouley saw the case with me on the 3d of March. On the 9th of March, for the first time, I noticed that there was a small spot on the left side of the occiput that did not resist pressure; in other words, the bone was softened at that point. As the case progressed, I could by pressure with the finger nail, appreciate the entire absence of the bony structure at one or two points. By observing this dried specimen, the bone at such points is found to be entirely absorbed, the openings being closed over by the pericranium and dura mater which I have left attached.

On the 19th of March I noticed, for the first time, a petecchial eruption over the right arm.

As the case progressed I noticed that the liver began to enlarge sensibly, and continued to do so until the time of death. This fact is, perhaps, of some importance, when we take into account the emaciation, notwithstanding she seemed to take nourishment very well. The skin was pleasant during all this time, and had not the dry, harsh feel that we notice so frequently in marasmus. From time to time I would notice a puffiness or œdematous swelling of the hands and feet; the petecchial eruption would go and come at longer or shorter intervals.

Dr. Gouley, at the time he saw the case, coincided with me as regarded the plan of treatment. At the same time he suggested the propriety of administering the syr. iod. ferri in addition to the other remedies. I accordingly gave this along with the syr. of the superphosphates.

On the first of April, strong febrile action set in, the stools, changing their character, became frequent, and consisted merely of undigested milk. The syrups were then discontinued, and alteratives were given with a view to stimulate the action of the liver, but to no purpose. She died from exhaustion, without convulsion, April 4th, at 7 P.M.

The post-mortem examination was made sixteen hours after death. The connecting tissue of the scalp was very œdematous. The brain was very pale throughout and also very œdematous. There was no flattening of the convolutions. The lateral ventricles were not distended. The lining membrane of the ventricles was not softened. The pia mater and choroid plexus were very pale. On examining the skull we found it to be of this oblique shape as I have already described. The bones, except at those points where absorption had taken place, were unusually thickened but very succulent. The thinning of the skull extends on the right side from the juncture of the anterior and middle third of the parietal bone backward a little beyond the lambdoidal suture. On the right side it is confined exclusively to the occipital bone in the neighborhood also of lambdoidal suture. The vitreous table is normal in appearance, as we find it in children of this age, except at those points where the thinning of bony structure is apparent; there we observe the *impressiones digitatæ*, as in the adult subject. This shows that the convolutions of the brain, pressing against this internal table, has caused absorption of the softened bone amounting in some spots to a complete deficiency of the bony structure. The only covering for the brain at these parts is the pericranium and dura mater. The pericranium covering the described protuberances was exceedingly vascular and quiet blue in the fresh specimen. This vascularity at the margins of these protuberances is abruptly arrested, and we see healthy bone. On cutting into one of these protuberances the knife readily entered into the subjacent tissue, and on dissecting up carefully the flap from the external table, we found that a bony deposit had taken place between the periosteum and outer table. From the place where the flap was dissected up there was noticed a peculiar porous condition of the surface of the bone. This is a commencement of a transformation of the external table from the compact to spongy structure, and this becoming incorporated with the new deposit, and also with the diploë, would leave the bone without a compact layer, if that part of the new formation nearest to the periosteum was not organized into a dense tissue. If life had been prolonged, the diploë would have been very much increased in diameter; this is a fact that has been noticed in similar cases that have been reported.

Dr. Krakowitzer, in answer to a question from Dr. Clark, stated that he thought it was a disease of the general system, from the fact that children laboring under this difficulty are never healthy. He did not think it should be compared with rachitic disease, because it occurred mainly in the head, and there was a corresponding increase of osseous matter that was thrown out in the vicinity. In rachitis, bony matter was wanting. There is not a want of the earthy basis of the bone It has been found that the disease occurs in a part of Germany where the drinking water contains a good deal less of lime than it generally does, and that, right near where the chemical constitution of the water is different, the disease does not occur. I am inclined to the opinion that it is a local disease, a disease of the capillary vessels of the skull, that the bone, by some process, gets softer than the brain pressing upon the bone, causes it to be absorbed, while new bony matter is thrown out in the vicinity.

Dr. Clark, in this connection, stated that he succeeded very well in collecting the urine in children, by squeezing the diapers. It answered every purpose, for both chemical and microscopical examination.

Phosphoric disease of the lower jaw.—Dr. Markoe presented a specimen of phosphoric disease of the lower jaw for Dr. Parker, with the following history.

The patient, a German, twenty-two years of age, had been working in a match factory for eight years, during which time he enjoyed perfect health, until four months previous to admission. At that time, he complained of a vague pain about his teeth, and had two or three extracted. The alveolar processes did not heal, and the bony surfaces remaining bare, seemed to increase in extent. A short time after, he noticed this: his face began to swell, and it was soon followed by the formation of an abscess. At the end of two weeks after, the abscess opened itself behind the ramus of the jaw. A second abscess soon after formed, opening underneath the jaw; at the same time, a fœtid discharge began to make its appearance from the inside of the mouth. The case from that time progressed slowly and steadily, until he came into the hospital. He then presented an unusually distorted countenance. The external surface of the tumor felt exceedingly hard, so much so, that it was thought there must be an involucrum present. Behind the ramus of the jaw, there were the two openings referred to. The operation for the removal of the diseased mass was performed by Dr. Parker. There was nothing peculiar about the operation; the incision was made in the usual place, and the soft parts were raised from the bone, the condyle disarticulated, and other sections at the symphysis menti made by the chain-saw. The diseased mass removed presented a beautiful specimen of what Stanley terms pumice-stone excrescence. Nearly the whole surface was covered with this material; the deposit was more abundant, however, at the angle of the bone. The patient did very well after the operation; and after he had remained in the house about a month, new bone had commenced to be deposited in place of that portion which had been removed.

Regular Meeting, April 27.

Anchylosis of knee-joint—Exsection—Death from tetanus.—Dr. Post presented a specimen of *anchylosis* of the *knee-joint*, which had been removed some months before, together with a cast of the knee, exhibiting the appearance of the part at the time of the operation. The patient was a young man who for many years had bony anchylosis, following an injury of the joint, the limb being bent at a somewhat acute angle. The operation was performed according to Dr. Buck's method. Great trouble was experienced after the operation from the excessive tension of the tendons of the flexor muscles. When the patient recovered from the effects of the ether there was a disposition to violent muscular action. In consequence of this agitation of the limb a considerable amount of hemorrhage took place, sufficient to cause a good deal of distension of the wound, and necessitate the removal of two or three sutures. This was followed by an undue amount of suppuration. Fourteen days after the operation the patient was attacked with tetanus and died at the end of fourteen days after. Profuse suppuration continued up to the time of death. He observed that the case was an unusual one, in relation to the duration of the tetanus; it was very unusual to see death take place so long after the disease manifested itself. Under such circumstances they were very apt to recover. The ends of the femur, tibia and fibula were consolidated together, forming a firm mass.

Tumor of the cerebellum—Death following the inhalation of ether.—Dr. Clark presented a specimen of *tumor of the cerebellum.* The case, said he, from which this specimen was taken, has lately interested us very much at Bellevue. It is that of a woman who died while ether was being administered, and the interesting question came up for solution to-day, whether the ether was the immediate or only cause of death, or whether the diseased mass about to be exhibited was the cause of death, the administration of ether at this time being no more than a coincidence; and finally whether the tumor rendered the patient incapable of bearing the influence of ether, so that the two concurred in the result.

In connection with the specimen, Dr. Clark asked the Secretary to read the two following cases of cysts in the cerebellum, from the *Liverpool Med. Chirurg. Review*, reported by Dr. James Turnbull.

Case 1.—Samuel Carpenter, a sailor, aged 32, was admitted to the Royal Infirmary, on the 12th of April, 1857, having been ill with pain in the head and neck of most intense character for six weeks. He had the greatest difficulty in turning or moving the head, and the pain was chiefly on the right side. The sight of the right eye was somewhat impaired, but there was no difference in the size of the pupils.

He had weakness, but no loss of power or feeling in the limbs. The tongue was very much furred when he came in, but it became nearly clean at one time, being variable in its condition. He had occasional vomiting, and the bowels were obstinately confined. Various remedies were tried—aperients, quinine and opium, without any benefit. It was thought that there might be some deep-seated disease of the vertebræ or bones, at the base of the skull, and issues were made with potassa fusa and iod. pot. given. These means all failed in affording any relief, and he was then brought gently under the influence of small doses of blue-pill. When his mouth became affected he appeared to experience great relief, but in a day or two after he died suddenly whilst eating his dinner. He was admitted on the 12th of April, and died on the 14th of May, having been ill therefore about ten weeks.

Post-Mortem.—There was no disease found in the vertebræ of the neck or in the bones at the base of the skull, but a cyst the size of a pigeon's egg was discovered in the right hemisphere of the cerebellum, imbedded in it and almost entirely covered by the cerebral substance. The walls were very thin and rather vascular, and it contained a thick yellowish clear fluid with also a clot of blood, which occupied about a third of the cyst.

Case 2.—Mrs. M., a lady about 34 years of age, sent for me on the 8th of May, to see her, in consultation with Mr. Kay.

The previous summer she had suffered from a severe and acute affection of the brain, for which she had been bled in the arm. She was pregnant at the time but soon recovered from the attack. Five months previous to my seeing her, she began to suffer severe pain in the head, for which, almost every treatment was tried—counter irritation and depletion as well as tonics, but all without the slightest permanent benefit. I found that she had very severe pain in the right side of the head behind the ear—occasionally, and especially when she moved her head, most acute paroxysms came on, causing her to scream out. At other times she was almost free from pain, but was unwilling to move her head lest it should bring it on. There was great irritability of the stomach, and she frequently vomited dark bilious matter. The bowels were rather costive. The tongue was a good deal furred, especially at the back. There was no heat of skin or febrile disturbance, and the pulse was generally 90 or under. She had deafness of the right ear, but the sight was unimpaired, and there was no loss of sensation or muscular power. She was brought gently under the influence of small doses of blue-pill, and for a week after she was comparatively free from pain, so that hopes were entertained of her recovery. The pain and vomiting then returned as badly as before and belladonna and Indian hemp were tried with some advantage. Morphia, however, was found to afford the most relief. There was no particular change till the 20th of July, when she had a very severe paroxysm of pain, and died rather suddenly.

Post-Mortem.—On examination of the brain a cyst was found in the right hemisphere of the cerebellum about the size of a small hen's egg, and containing a clear yellowish serous fluid. The cyst was lined by a very fine membrane. The brain was otherwise healthy, and there was no disease of bone. . . . .

These cases show us some very important practical facts, and I have not met with any recorded case exactly like them. They prove that cysts in the cerebellum are at least by no means innocuous, but that they may produce the most intense description of paroxysmal pain, and that *they are probably a more common cause of sudden death !! than is generally known.*

Dr. E. B. Dalton read the history of the case, as follows: Margaret R———, native of Ireland, single, 21 years of age, was admitted into Bellevue Hospital 27th of January, 1859. At that time she complained of frequently recurring attacks of intense headache, accompanied with excessive nausea, vomiting and vertigo. These attacks came on at intervals of four or five days, lasted some twenty-four or thirty-six hours, and then passed off, leaving the patient comparatively comfortable, though sometimes still, dull pain in the head, and dimness of vision remained. On the closest examination of her previous history and present condition, no clue to the cause of these symptoms could be detected. The bowels were slightly constipated, the urine normal. A physical examination of both chest and abdomen revealed nothing pathological, and according to the patient's statement the catamenia had always been normal, and she never had sexual intercourse, although the appearance of her breasts and certain lines upon her hips gave rise to slight suspicion as to former pregnancy. When first admitted she had been troubled with the symptoms detailed above for some two or three months.

She remained in the Hospital until the 4th of the present month (April, 1859), without material benefit.

No diagnosis was made. She again entered the Hospital on the 7th of April, suffering with the same difficulties unabated. During the attack she apparently suffered the intensest agony, throwing herself from side to side, and at times holding her hands tightly to her head and screaming with pain. Pulse rapid, but not unnatural in force ; countenance sometimes pale, and sometimes flushed, and the surface generally hot and cold by intervals. The general treatment was alterative in character. During the attacks a great many different things were tried to alleviate the suffering, but the only one known to be successful in this case was the inhalation of sulph. ether, which was entirely so in each instance. The patient would be kept under its influence for several hours. The drug had been administered three times, I gave it myself first some seven or eight weeks ago, and again two weeks subsequent. The third time it was given by my assistant. Some two or three ounces were made use of each time. No unpleasant effects had ever been noticed. On Sunday afternoon (April 24) patient expressed herself as feeling unusually well. On the morning of the 25th she was found suffering intensely with an attack similar to her previous ones. Ether at that time was administered by my assistant. A few minutes afterward I was summoned to the ward, where I found the doctor producing artificial respiration. At that time the countenance of the patient was slightly livid; pulse rapid, but of tolerable strength, all voluntary effort at respiration had ceased. She was immediately carried to the window, laid upon the floor, and artificial respiration continued for seven hours. Other means were also used, such as dashing hot and cold water on the body, electricity, ammonia, and injections of hot brandy and water. The pulse remained fairly perceptible for twenty minutes, the hue of the countenance improved at first, then became more livid, and alternated slightly in this way for several hours. At the end of about six hours dark blood began to trickle from the mouth and nose, and at the end of the time above specified efforts at resuscitation were given up as useless.

Autopsy, 51 hours after death :—Body well nourished, upper portions pale, dependent portions somewhat livid; rigor mortis obvious, not extreme, skin in iliac fossa very blue. Nails and fingers as far as second joint of same hue; reddish blotches on inner side of lower extremities, and on the interior of right leg.

Head.—On removing the scalp no unusual appearance is presented, the blood which escaped being of a normal color. Skull of average thickness, presenting no peculiarity; surface of the brain, as seen through dura mater, natural; longitudinal sinus contains a notable quantity of air. Surface of brain, after removal of dura mater, presents nothing abnormal, save the appearance of several bubbles of air in the veins near the longitudinal sinus; surface of brain more dry than usual. On incision of the hemispheres punctæ vasculosæ very faintly perceptible; ventricles distended with perfectly transparent serum—an ounce and a half in quantity. Lining membranes of ventricles perfectly natural in appearance.

In the cerebellum nearly in the middle line of the body is a tumor. No odor of ether perceptible in the mouth. Chest, about $\frac{1}{8}$ inch of subcutaneous fat on the walls of the chest. Heart, weight 9 ounces, contains perfectly fluid black blood, is well covered with fat, especially the right ventricle, where there appears but little healthy muscular fibre. Lungs have traces of old interlobular pleurisy, present nothing abnormal; abdomen $\frac{1}{2}$ inch of fat on walls; liver normal; kidneys, both natural in size and external appearance; stomach contains a small amount of bloody mucus. *Intestines.*—Mucous membrane intensely congested; uterus natural; bladder contains small amount of urine; blood throughout the body fluid and dark colored.

Dr. Clark remarked: Here is the tumor spoken of. It will be remembered that the surface of the brain was dry; that there was no increase in the thickness of the lining membrane of the ventricles and ventricles themselves containing an ounce and a half of transparent fluid; that nothing further was noticed abnormal until the section came down to the cerebellum, when the first slice exposed a portion of this jelliform material. This morbid deposit occupied only the left lobe. The tumor measures 3 inches in length, $2\frac{1}{2}$ in width and $\frac{3}{4}$ of an inch in thickness. Its character was malignant, and of the calloid variety.

Note.—The following facts have since been obtained: For the last four or five weeks of the patient's life there was a constant unsteadiness in her gait, and also a marked irregularity in the movements of her hands when engaged in any occupation. She frequently rolled out of her bed, and although she occupied beds in different positions, she invariably rolled out toward her left side. On the morning of her death, she would have once or twice rolled out upon the floor, had she not been prevented by the other patients near her. She was in the habit of walking upon the veranda, and in the hospital yard, but always with the same staggering, uncertain gait. The general inaccuracy of her movements became so much increased during the last week of her life, that she was unable to sew, according to her previous habits. The nurse reported several times that the patient was becoming silly and childish, though in conversation with her there was never noticed anything more than a general sluggishness of speech and manner, which indeed had characterized her from the first. The countenance bore a dull, stupid expression. Double vision was a marked symptom, and the right eye was so much impaired in its function as to be nearly useless. The patient was in the habit of covering it when wishing to look at any object.

PART SECOND.

CRITICAL ANALYSIS.

A Treatise on Gonorrhœa and Syphilis. By Silas Durkee, M.D., Fellow of the Mass. Medical Society, etc., etc. With eight colored plates. Boston: John P. Jewett, & Co., Publishers, 1859.

This, so far as we are aware, is the first work on this subject, originally published in this country. Independently of the cases, which profusely illustrate the text, it is chiefly a compilation. Looking at it in this light, we find the author's task of compiling very unequally performed: some portions of the book surprising us by the amount of industry and research which must have been required to collect so large an amount of material, and other portions being quite imperfect, as we shall presently endeavor to show. One defect inherent in nearly all compilations is obvious in this, viz.: that in his zeal to quote the opinions of others, the author omits to express his own, if he has any, or to afford his reader any guide to make his own selection.

In his preface, our author says: "The occurrence of blennorrhagia in the male, as resulting from leucorrhœa or from the menstrual fluid, has long been a standing theme of controversy, and is still involved in obscurity. I flatter myself that the manner in which I have disposed of this subject, will receive the approbation of my readers generally." We confess we are not of those who can see any obscurity in this question, and are also sorry to say that we cannot bestow our approbation on the manner in which it is here disposed of. A statement of the case is simply this: intercourse with a woman during her menstrual period, or while she has leucorrhœa, or, in other instances, where we can discover nothing but a normal condition of her organs, does sometimes, as is confessed by all, excite a urethral discharge in the male. If this discharge be not identical with that arising from contagion, the burden of proof lies with those who maintain it is not, to show some diagnostic sign either in the course or symptoms of the two diseases, or in their liability to complications, by which they can be distinguished. It is almost needless to say that such proof is entirely wanting; and until it be produced, we maintain that we are bound to regard the two as one and the same affection.

Our author at first admits the existence of cases of urethral discharge of simple origin, though he afterward seems inclined to deny it. On page 3 he says: "Men have also been known to receive a blennorrhagia from healthy women with whom they have had sexual intercourse, while the menstrual flow has been upon them. The same results occasionally supervene upon violent and long-continued dancing, frequent venereal indulgence, and the want of co-aptation in the genital organs of the two parties. Masturbation, rheumatism, and gout likewise occasion gonorrhœa." Yet on page 6, he says: "During a practice now of thirty years, I have had scores of patients, who have pretended that their urethritis might have been derived, or perhaps was derived, from the vaginal or uterine secretion now alluded to; but I have never seen any evidence that convinced me of the fact. My faith in the power of leucorrhœal secretion as a source of blennorrhagia in the male, is scarcely equal to a grain of mustard seed." It is somewhat difficult to reconcile these two statements, since the one denies what the other in the same words affirms; but on turning back to page 2, we find that our author admits, in a few lines, two kinds of gonorrhœa, *gonorrhœa simplex* and *gonorrhœa impura*, and, although he does not say so, we suppose, in the paragraph first quoted, he is speaking of the former, and in the other of the latter.

Let us see how he distinguishes these two varieties; and first, we turn to his definitions: "Simple urethral running, or blennorrhagia *simplex*, in the male, consists in an increased secretion from the urethral glands or follicles, and proceeds from mere local irritation, is destitute of any contagious element or virulence of any kind, and may be produced by a variety of causes. It is specifically different in its nature from malignant gonorrhœa *impura*, which alone can be propagated." One point of difference is here distinctly stated, viz., that the one is contagious and the other not. We would like to inquire how Dr. Durkee knows that his gonorrhœa simplex is not contagious. Is his confidence in this fact so great that he would permit a patient with a urethral discharge, which he knew was contracted from the menstrual flow, to marry? We suspect not, especially when we read on page 18: "Unless a sample of blennorrhœal exudation were to exhibit the purity of distilled water (!) when examined with a high magnifying power, no man *would be justified* in the conclusion that it was bereft of noxious properties." Or are we to conclude that in nineteen-twentieths of the cases of gonorrhœa met with in practice, about the proportion of those of simple origin, as stated by Ricord, the discharge would be as pure as distilled water under one of Spencer's lenses with a magnifying power of 600 diameters?

But perhaps our author founds his distinction, as has often been done before, upon a difference in the intensity of the symptoms and the duration of the disease. On page 12, under the head of diagnosis, he says: "The inflammation (of gonorrhœa simplex) is moderate, producing but little pain or scalding in micturition; the urethral secretion occasions little or no excoriation of the parts with which it comes in contact, and the complaint yields to gentle treatment." We deny that the symptoms are of this slight character, except in rare instances; and even admitting that they are, as a general rule, milder, and the disease less obstinate than when arising from contagion, it is natural to suppose that its intensity will be in a measure proportioned to the intensity of the cause, and this fact is no argument in favor of there being two distinct varieties. Our author admits that, "in some rare instances of non-specific urethritis, the symptoms assume great severity." We maintain that, whatever the cause of the disease, there is the same liability to any of the complications of gonorrhœa, and that there is never sufficient difference in the intensity of the symptoms in any given case, to enable any man to tell how it originated.

Dr. Durkee acknowledges the uncertainty of any such means of diagnosis. He says: "The physician has no positive means of distinguishing, in all cases, a simple gonorrhœa, not brought on by impure sexual intercourse, from a specific urethritis caught from an infected prostitute." Again, he speaks of "the assemblage of phenomena being almost precisely similar," in the two cases. Until he tells us how the two can be distinguished, independently of their history, in *one* case, we must believe them undistinguishable; and until he informs us how the symptoms differ in *one* particular, we must regard them as "precisely similar," and not "almost" so; nay, more, that they are one and the same affection.

It is apparent throughout this chapter, that one great, if not the chief objection of the author to admitting but one species of gonorrhœa, is a morbid fear lest patients should impose upon him, and also a dread that morality may suffer, inasmuch as "the sensualist might essay to appropriate the fact to his personal advantage, in the hope that it might shield him from the multitude of his sins, however frequently he had gone astray into the path of licentiousness." We hope no one will accuse us of a desire to encourage vice, when we say, that we think it is time that every man who has the clap, should not therefore be considered a liar. Neither the cause of truth, science nor morality is subserved by such a course as this. We are well aware of the falsehoods sometimes resorted to by venereal patients, but they are generally so transparent that they can be seen through at a glance; and we maintain that the statements of the majority of this class of patients, who come under the care of any physician, can be relied upon implicitly, so far as any facts are concerned about which they must possess certain knowledge. A man may honestly state that he has had no chancre, though we find indubitable evidence of it in an induration upon his penis; but he knows whether he has had connection with one woman or two, and with patients who have been often under our care, we must be poor judges of character if we cannot feel confident or not, that they will state what they know. With regard to the sensualists, we would suggest, that it is better that they should "essay to appropriate the fact" a hundred times, rather than that we should wrongfully accuse an innocent person in one instance. Dr. Durkee confesses that he "usually turns a deaf ear to all such specious explanations from patients." We venture to say, that if he will, with discrimination, turn a hearing ear, to some of them, and turn an eye, seeing through a speculum, to the field from which they reaped their disease, he will come to a different conclusion on this subject, and the "obscurity" which surrounds it in his own mind, and envelops his description of it, will vanish.

After speaking of the causes of gonorrhœa, our author describes at length the symptoms, complications and treatment of this affection. We regard this as decidedly the best executed portion of the work, exhibiting, as it does, great thoroughness and industry in its execution. The author, however, occasionally draws on the marvellous, as when he says of the discharge, that "it emits a disagreeable, nauseous odor, wholly different from ordinary pus. The effluvium is sometimes so strong and impressive on the olfactories, that the practitioner recognizes the nature of the case before the patient tells what ails him." (!) The author may, however, derive his authority for this statement, from Vidal, who recognizes cases of gonorrhœa in the male of leucorrhœal origin, by "a sour and nauseous smell like that of the *fluor albus* of the woman with whom he had connection." Both these statements would require a strong imagination for their verification, we suspect. That the male organs, affected with gonorrhœa, have, when exposed, a perceptible and disagreeable smell, is an undoubted fact, but it is not peculiar to gonorrhœal discharges, being readily observed when purulent matter of any kind is pent up in this situation. It depends, in short, on the seat of the disease and not on its character.

In speaking of the treatment of gonorrhœal ophthalmia, Dr Durkee, recommends venesection in a manner not sanctioned by the best modern ophthalmic surgeons. We would refer to the writings of Critchett, Dixon, France and others, in support of the opinion that venesection and other general antiphlogistic measures, in this disease, are deserving of the highest censure.

But leaving this portion of the work, we proceed to the second portion, which relates to a more important subject, viz. syphilis; and here, we regret to say, that our author has been less successful than in the first part of his book. We do not regard the chapters on this subject, as at all complete or up to the knowledge of the present day; many important distinctions, now fully established, are entirely overlooked; the meaning of the author is at times obscure, and the necessary guides to assist the young practitioner in forming his diagnosis and selecting his treatment are wanting.

The first chapter under the head of syphilis forms an introduction to this branch of the subject, and contains general considerations with regard to the syphilitic virus and primary symptoms, closing with the abortive treatment of the latter. We find, however, no attempt in this chapter to classify chancres, or to describe the different appearances which they present. Indeed, the fact that they are susceptible of classification at all is not distinctly stated, and can only be drawn by inference from some allusions in the text. Perhaps, however, the description and classification of primary symptoms is to be found in a subsequent portion of the work. We turn over the pages, and find one chapter devoted to the indurated chancre, another to the masked chancre, another to the inflammatory chancre, and another still to the phagedænic chancre. But where is the simple chancre, that form of primary syphilis which includes three fourths of all the chancres that exist? We search for it in vain throughout the book; *non est.* But again, perhaps our author does not believe in the existence of simple chancres, and looks upon all primary ulcers as more or less indurated and liable to be followed by constitutional syphilis. Some ground for this supposition is found upon page 178, where it is stated : "It is believed that the most simple chancres that have the least degree of induration may be followed by constitutional symptoms. Some authorities" [*one?* authority, Vidal], "maintain that all chancres are more or less indurated." But this cannot be our author's faith, for we read in a foot note, on page 176, a confession, which is all that the most ardent admirer of Ricord could wish, viz : "It must be confessed that the evidence in favor of a *duality* of *chancrous* virus is overwhelming, and that it is very probable that much time will not pass before it is admitted by the whole profession !" Where then—we return to our starting-point—can we find the description of the simple chancre, the soft chancre, the non-infecting chancre, the chancroide ?

In the chapter on indurated chancre, we find no account of the usual appearance of this form of ulcer, of the characteristics of the induration or the varieties it may present, of the inflammatory engorgement which may be mistaken for it, or of the assistance in diagnosis, to be derived from an examination of the neighboring lymphatic ganglia. Our author's idea of an indurated chancre appears to be limited, in the main, to the sore described by Hunter. On page 177, he says : "Probably not one chancre in twenty possesses the characteristic induration of its base and edges and all the other peculiar attributes, which constitute what is called the Hunterian chancre, and which was formerly regarded by many leading surgeons as the only true type or indication of the syphilitic sore, and which alone, under ordinary circumstances, was thought capable of infecting the constitution." Again, on page 209 : "It has already been stated that the form of indurated ulcer described by Hunter, as having a hard base, with a margin terminating abruptly, and not extending itself into the adjacent tissues, is seldom met with. We entirely agree with our author as to the rarity of such an indurated chancre as here described. But, in the place of considering what Hunter described as a simple chancre, suppose we inquire what is now known by that name ; or, as the "Autocrat of the Breakfast-table" would say, let us *depolarize* the terms, "indurated" and "Hunterian chancre." What, then, is the form of primary ulcer which is regarded as the precursor of constitutional syphilis, by those surgeons of the present day, who believe in the duality of the chancrous virus ?

In reply, we would say, an infecting chancre is usually (in 146 cases out of 170, according to one of Bassereau's *statistical* tables*) a mere *erosion*, destitute of abruptly terminating edges or exudation upon its surface, and furnishing but a small amount of secretion, which is usually clear and transparent ; in a few cases (24 out of 170, according to the same table of M. Bassereau), it is an excavated ulcer; in both instances it is indurated, the induration varying in development, and usually persistent after the cicatrization of the chancre, but sometimes transient and disappearing in a few days; finally, it is accompanied invariably by an indolent engorgement and induration of the pleiad of lymphatic glands in the groin (generally on both sides, sometimes on only one), which rarely suppurate and never specifically, and usually persist for months or even years. Such is the indurated chancre, if you will call it so, of the present day; or, better still, laying aside a term around which still cling false ideas of the past that it would be difficult to sever, such the *infecting chancre.* These are the characteristic symptoms, mutually supporting and explaining each other, which announce infection of the constitution, and a knowledge of which, in the great majority of cases, will enable the surgeon to foretell his patient's future immunity or the contrary, and act accordingly. But these symptoms find no place in Dr. Durkee's "Treatise on Gonorrhœa and Syphilis."

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* "Affections de la peau symptomatiques de la syphilis," p. 140.

Had the assistance to diagnosis, which a description of these symptoms would have afforded, been given in the book before us, we should have little fault to find with the treatment of primary sores recommended by the author, since he evidently relies, in the main, upon the presence of induration as an indication for a mercurial course; but without this, we fear that the young practitioner, who takes this book for a guide, will be left in the dark. We would remark, however, that Dr. Durkee seems to confine the deep cauterization of chancres to the abortive treatment, and makes no mention of its value when applied to simple chancres for the purpose of transforming them into simple ulcers, and thus hastening their cicatrization.

But if we find our author's description of chancres meagre, imperfect and confused, what shall we say of his account of buboes? Truly, here is "confusion worse confounded." The description of this whole important subject is contained in two and one-third pages, and this in a book comprising 431 pages! Here again we find no classification, nor any attempt at any; no mention of sympathetic buboes, virulent buboes, nor indurated buboes. Buboes are all one! But, excuse us; our author does describe what he calls a syphilitic bubo, but it is an anomaly, a hybrid, such as we never heard of before and probably never will again. As a curiosity, then, it is worthy of quotation: "Buboes that arise in consequence of indurated chancre, *rarely suppurate,* being subject to the same law of morbid action that governs the chancre. Such buboes are regarded by some writers, as nothing more nor less than *chancres* seated in these glandular bodies. They are also denominated indurated, indolent, constitutional buboes, and as they *never suppurate specifically,* some surgeons consider that no local treatment is ever serviceable in their removal." "The true syphilitic bubo is very indolent in its progress, remaining nearly stationary for several weeks, causing but little pain or inconvenience; but the mere fact of its existence is of no trifling significance. It shows that the system is impregnated with the specific virus, which has found its way into the channels of intercommunication, and through the medium of the blood and other fluids, has poisoned the whole animal economy." "The virulent matter of the true syphilitic bubo retains its contagious property, so long as it remains in the ganglion, that is, *it is inoculable"* (!) So far as we can judge, this hybrid is a cross between an indurated and a virulent bubo, but we think it ought to be submitted to Prof. Wyman for identification. After this lucid (?) description, the author remarks; "It is a matter of great consequence that we should be correct in our diagnosis of the kind of bubo we meet with, because important therapeutic indications are founded on the opinion we form of the character of the swelling." (!!)

The mechanical execution of Dr. Durkee's work reflects great credit on the publishers, Messrs. Jewett & Co. The type and paper are excellent. The book is illustrated with eight colored plates of the syphilodermata, fairly executed for this country, though not equal to the illustrations of foreign works. The original of the plate of syphilitic rupia, which serves as a frontispiece, must have been a "splendid specimen," though we think it would have been in better taste to have given it its proper position in the text, since its present position reminds us unpleasantly of the yellow-covered literature, which is occasionally thrust under our noses, if we pass through the lower part of the city, carpet-bag in hand, on a day's vacation. F. J. B.

Biblisch-Talmudische Medicin, oder pragmatische Darstellung der Arzneikunde der alten Israeliten. Von R. I. Wunderbar. Riga und Leipzig, 1850.

Biblical and Talmudic Medicine; being a history and description of the Medicine of the ancient Israelites.* By R. I. Wunderbar. Riga and Leipsic, 1850. Reviewed by M. Blumenthal, M.D., Physician to Jews' Hospital, New York.

Among all the various works, essays, and monographs that have appeared within the last decennium relating to the History of Medicine, there is probably none more worthy of attentive study, or more interesting than Wunderbar's "Biblical and Talmudic Medicine." It takes us back to the days of the patriarch Abraham (two thousand years before the Christian era), and extends throughout the entire period of the Bible and other inspired writings, down to the close of the Babylonian Talmud—five hundred years after the birth of Christ, thus grouping 2.500 years of accumulated knowledge and experience as known at that early period. It places before the antiquarian many facts and theories that are highly interesting; and presents to the medical philosopher much that is deserving of reflection and study. But above all this, and more than all—a true and faithful picture of the actual state of medical knowledge of the ancient Israelites is placed before the world, in a concise and interesting as well as instructive and philosophical form; and while an act of justice is being consummated in giving the subject its proper position and enabling the student to appreciate that "which is of old," it at the same time answers a want sufficiently long felt, namely, it supplies the means of learning what was known and practised by the Hebrew nation, then the most enlightened on the face of the earth. We will, however, let the author himself speak:

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* The Talmud, which will be frequently mentioned, is an immense work comprising many volumes, and containing the traditions of the Jewish nation, their common Law and the questions and decisions of the Hebrew doctors relative to their doctrines and usages.

"This work, in which it is attempted to present the entire medicine of the Hebrews, Biblical as well as Talmudical in all its branches, has neither the object of establishing a new and unknown medical system, nor even to defend an old one, but still less to claim the place of a practical manual of medicine; but simply to present a faithful picture of the medical principles of a nation, which, owing to the wonderful vicissitudes of fortune it has outlived, has acquired a remarkable position in the world's history, and which had distinguished itself in the cultivation of the mind beyond all other nations of its time; and therefore in medicine also, not only not remaining behind its contemporaries, but even maturing its earliest seeds in its midst; in a word, we are to exhibit here the elementary principles of that which the people of Israel, since its very infancy, had thought in medicine, how these were at a later period developed, and finally made into a science with its practical application—in as clear and comprehensive, but yet as concise and complete a manner possible."

Here, then, is an ample explanation of the scope of the work before us, and it commends itself to us, not alone because it treats of the knowledge possessed in the department of medicine, by an interesting people, but it is of importance as showing the antiquity of many of our theories, remedies, instruments and operations.

It exhibits in many parts a course of procedure in the treatment of disease, as taught them by observation and experience, which modern science and our advanced notions on physiology and pathology have hardly improved.

But it likewise shows how superstitious and unfounded some of the dogmas were, which all ages, the remotely ancient as well as the modern, advanced with such assurance and maintained with such tenacity.

It must certainly appear surprising that for so many centuries the medicine and surgery of the Bible, and still more so of the Talmud, should not have found a champion sufficiently bold to devote himself to the task of collecting the facts scattered throughout its numerous pages. It is true, numerous essays and works upon special Biblical-medical subjects have, from time to time, appeared; but such works can only have value when they have all the light thrown upon them that the Talmud and Midrash possess, and possess alone, as being the most ancient authenticated commentaries and explanations of the Bible that the world possesses.

As to Talmudic medicine the author says: "As relates to this branch, it is really astounding that so little has been done in modern time in exploring this field, so extensive and comprehensive. The reason, however, may be ascribed to the circumstance, that the Talmud, with all its contents, maintained, until within comparatively a few decennia, such a position of isolation as regards the general sciences, that no one thought of rescuing its treasures of knowledge buried deeply beneath the dust and ruins of ages.

"For centuries the Talmud remained terra incognita to all Christian literati, and if a few even took the pains of studying the same, it was generally done for purposes inimical to Judaism, for which reason, likewise, they generally busied themselves more with the dogmatic than with the scientific or medical knowledge contained therein.

"The Israelite, on the other hand, found for ages and ages his sole (literary) employment in the Talmud, and only in the Talmud. He drew consolation therefrom in suffering; in it he lived and labored; here he obtained his general education, his religion, morals, jurisprudence, mathematics, history, and medicine. But to transmit this knowledge to the outer world was not within his sphere. What cared he for the outer world, since it repulsed or persecuted him? Or in what language should he have rendered it, since he had no fatherland, and was neither permitted to have possessions, nor yet use the language of the nations among whom he lived? Is it to be wondered at that during such a dark period the Talmud received no popular scientific exposition even from Israel's sons? How different is our time!" . . .

It is left, then, for our time to fill the cleft thus left. The author has come nobly to the task, and how conscientiously he has fulfilled it his work itself will show.

To the consideration of this we will now proceed.

The author has divided his labor into the following parts:

Part 1st. Introduction, containing

I. The History of the Medicine of the Hebrews, divided into
  a. Its periodical divisions.
  b. Origin and progress of Hebrew Medicine.
  c. Its system and character.
  d. Its discipline.

II. Of the Weights, Measures, Instruments and Apparatuses of the Ancient Hebrews.

III. Literature of the Med. of the Hebrews.
  a. Biblical.
  b. Talmudical.

Part 2d. Containing:

I. Materia Medica and Pharmacology of the Hebrews.
II. Macrobiotic and Dietetic Laws "
III. Pathology and Surgery "
IV. Therapeutics and Sympathy "
V. Medical Jurisprudence "

It it evident, from the foregoing enumeration of subjects, that our remarks must be as brief as possible, else the review will form another book.

The author divides the History of Hebrew Medicine into, 1, Biblical; 2, Ante-Talmudical; and 3, Talmudical.

The first begins with Abraham and extends to Ezra (2000 years; 450 years before the Christian era).

The second, from Ezra (450 years before the Christian era) to Theudas of Laodicea, or the destruction of Jerusalem by Titus (70 years post Christian era).

The third period (Talmudical), from the destruction of Jerusalem by Titus (anno 70) until the completion of the Babylonian Talmud (500 years post Christian era).

Origin and progress of Hebrew medicine.—"When we search for the origin of medical science among the Hebrews, we are taught by observation that, as among other barbarous nations, even so among the Israelites. So long as they had not reached a degree of civilization, medicine could hardly have existed either as an art or science, for the employment of reason for the establishment of general principles and rules has always been unknown among uncivilized nations." Consequently, we find nowhere in the Bible or profane writings, any mention of a physician, or surgical or obstetrical operation, until the time of the patriarch Abraham. It was he who first performed the operation of circumcision, which, in its performance, as well as the after treatment, presupposes a certain degree of surgical knowledge. It appears, however, that from the time of Jacob, the patriarch, and the emigration of his family into Egypt, more attention was paid to this subject. For it is here mentioned that practising Hebrew midwives were then in existence, and it is even probable that the difficult labors of Rebecca, Rachel, and Tamar, were assisted by midwives, probably Hebrew. In Genesis xxx. 14, we find that the atropa mandragora (mandrake) was then already in use among the Israelites to cure barrenness.

Though these and other attempts, in the field of Hebrew medicine, can hardly be considered as the result of scientific research or reflection, still they show that at so early a period in the history of the world, mankind began to look for remedies for its ills. It was in Egypt, however, that some progress was made. Moses, being the adopted son of a princess, enjoyed all opportunities that the times and circumstances offered to learn of the Egyptian priests what they knew of medicine and chemistry.

How well he employed the opportunity, the laws and ordinances he afterward promulgated to his people, namely, the dietetic rules, on leprosy, on seminal diseases, and other sanitary regulations so often met with in the Bible, sufficiently demonstrate.

"In the absence of remedies, dangerous and particularly internal diseases, were generally left to nature." Prayers and sacrifices were then the only resort or consolation for the patients and their relatives. It is worthy of remark, however, that, unlike the idolatrous surrounding nations—the priests among the Israelites never resorted to these acts of chicanery and pretended witchcraft through which the heathens strove to control and influence their adherents. Nor was the practice of medicine restricted to the priests among the Israelites, or their special privilege, although they usually were the physicians, for the reason that owing to their being generally better educated, they also knew most of the diseases of their tribe. The treatment of leprosy and the execution of the various laws relating to blood and cleanliness were generally to be enforced by the Levites, and the priests were, as is well known, of the tribe of Levi.

"With Solomon," says our author, "commences a new era in

Hebrew medicine. The Bible tells us of this wise king, that his wisdom well known among the nations and surpassing even the Egyptians, was greater than that among any Oriental nation; that he possessed a knowledge of the vegetable kingdom from the mighty cedar to the humble hyssop, and that he also knew to speak of beasts, of fowls, insects, and fishes (1 Kings, chap. iv. 33). Solomon appears also to have known of "healing herbs, and a healing plaster" (Eccles. iii. 3.) and several of his allegories allow us to ascribe to him some knowledge of anatomy and physiology. Further on he adds, "It is to be supposed that Solomon collected all that was then known among his own people, as well as all he could gather from the surrounding nations (especially the results of the medical practice, and experience at the temple of Æsculapius at Sidon, among the Phœnicians, then already flourishing) and, that he carefully compiled all this into a book afterwards frequently mentioned in the Talmud, as the 'Physician's Book,' or Sepher Rephuoth."

Contributions to Midwifery, and Diseases of Women and Children, with a Report on the Progress of Obstetrics and Uterine and Infantile Pathology in 1858. By E. Noeggerath, M.D., and A. Jacobi, M.D. New York, Baillière Brothers, 1859; pp. 466.

The editors of this volume are well known to the readers of this Journal by their contributions to its retrospect department during the past year. The work consists of two parts—Original and Retrospect—the former occupying 96, the latter 370 pages. The first part contains articles on *Induction of Premature Labor; Injection of Caustic Solutions into the cavity of the Womb; On a New form of Pessary; The Pathogenesis of Uterine Polypi; Invagination of Colon in an Infant; On the Oxysulphuret of Antimony as an Expectorant; On the Premature Closure of the Fontanels and Sutures of the Cranium.* The reports on obstetrics and uterine and infantile pathology embrace a complete review of all the publications on these branches during the past year. The simple statement that 109 periodicals were reviewed, and the most valuable matter carefully collated, is a guaranty of the value of the retrospect. We trust that the success of this annual will be such as to encourage its authors to continue the series. The typographical execution of the work is creditable to the publishers.

Memoir of John Griscom, LL.D., late Professor of Chemistry and Natural Philosophy; with an account of the New York High School, Society for the Prevention of Pauperism, the House of Refuge, and other Institutions. Compiled from an Autobiography, and other sources. By John H. Griscom, M.D. New York: Robert Carter & Brothers, 1859, pp. 427.

The subject of this memoir was born of Quaker parentage, at Hancock's Bridge, New Jersey, in 1774, about the beginning of the war of the Revolution. Having but the most limited opportunities for acquiring an education, he, however, made such diligent use of the means at his command, as to fit himself for a teacher at the age of 17, and in this avocation he afterward attained the most honorable distinction, and a large field of influence. In 1807, he was induced to establish a school in this city, and from this period he became an active and philanthropic citizen of New York. We find him, subsequently, a Professor of Chemistry in Columbia College, a member of the New York Historical Society, and a member of the Literary and Historical Society. To his efforts we owe the establishment of some of our most excellent charities. Prof. Griscom travelled extensively in this country and abroad, and being a man of general information, and familiar with the physical sciences, his reminiscences and diary of his travels are extremely interesting. His travels abroad were published under the title, "A Year in Europe," which passed through two editions. Dr. Griscom spent the latter part of his life in Burlington, Vt., in the enjoyment of a serene old age, and devoted to works of benevolence. He died at the age of 77.

This biography presents us with the life of one of our early citizens, and it is such a history as should be placed on record for the benefit of future generations. The lessons which it teaches of self-reliance, independent thinking, temperance, philanthropy, and of the blessings which flow from the practice of the Christian virtues, should be impressed upon our youth.

The memoir, much of which is an autobiography, is written in a pleasing style.

A Practical Treatise on the Diseases of Childhood. By T. H. Tanner, M.D., F.L.S., Licentiate of the Royal College of Physicians, etc. Philadelphia: Lindsay & Blakiston, 1859, pp. 464.

The design of this work is to present to the student and practitioner of medicine a complete work on the disorders of infants and children within a moderate compass. The first four chapters relate to general observations on the period of childhood; the diagnosis and prognosis of infantile diseases; infantile therapeutics; the management and education of children. The remainder of the work is devoted to the special diseases of childhood, with an appendix of formulæ.

Water, as a Preservative of Health, and a Remedy in Disease. A Treatise on Baths: including cold, sea, warm, hot, vapor, gas, and mud baths; also, on Hydropathy, Pulmonary Inhalation; with a description of bathing in ancient and modern times. By John Bell, M.D., Fellow of the College of Physicians, Philadelphia. Second edition. Philadelphia: Lindsay & Blakiston, 1859, pp. 658. Price $1 25.

The design of this work is to furnish that knowledge in regard to the employment of water, in health and disease, which not only the physician, but the patient, must have, in order to its proper use. The first sections treat of the functions of the skin, and the conditions for preserving them, as clothing, exercise, baths, etc. The history of bathing is then given, with interesting descriptions of the baths of ancient Greece and Rome, and of modern Europe. The proper uses of the bath are then pointed out as a means of preserving health. The remainder of the work, comprising two-thirds of the volume, is devoted to the various methods of using water as a therapeutical agent. The volume contains a vast amount of practical matter, presented in the easy and graceful style for which the author is distinguished. It should be carefully studied by every physician in these days, when the treatment of disease by water has been popularized by specialists who know little of, and care less for, its scientific employment.

On Poisons in relation to Medical Jurisprudence and Medicine. By Alfred Swayne Taylor, M.D., F.R.S., Fellow of the Royal College of Physicians, London, etc., etc. Second American, from the second and revised London edition. Philadelphia: Blanchard & Lea, 1859, pp. 755.

Toxicology is rapidly becoming one of the most important branches of legal medicine. The fearful increase of the crimes of homicide and suicide by poisoning, within the last few years, has stimulated chemical inquiry to such an extent as to add largely to our previous knowledge of the action of the various poisons. This is seen in the text books on poisons, which in their new editions appear almost as new works. The work of Dr. Taylor, though a second edition, has been so much modified as to have the character of a new treatise. Such a work is indispensable to the practitioner, and none has yet been published that so happily meets his wants.

RECENT FOREIGN PUBLICATIONS.

We intend hereafter to notice regularly the issue of foreign medical works, with such notes on each individual volume as our space will allow. We shall then be able to furnish those who are interested in procuring recent works on any branch of medical science information of the appearance of works, and of their practical value.

Annuaire de la Syphilis et des Maladies de la Peau. Par MM. P. Diday, et J. Rollet. Année 1858. Paris, J. B. Baillière et fils, 1859. —We are most happy to welcome the first number of an annual on these important subjects, especially when bearing upon its title page the names of two such accurate observers as MM. Diday and Rollet. We shall soon have occasion to give in the pages of this Journal the substance of the articles embraced in this volume, and will therefore, at present, merely enumerate them; adding, that the severe scrutiny and analysis of facts presented, and the impartiality in judging them, so requisite in all subjects connected with syphilis, are characteristic of the work throughout.

Researches on Gonorrhœal Rheumatism: by M. Rollet.

Injections limited to the deeper portion of the urethra; the manner of using them and their curative effect ; by M. Diday.

A case of Transmission of an Indurated and Simple Chancre : by M. A. Rey.

Herpetic Affection of the Urethra : by M. Boneand.

Essay on Fungous Syphilitic Sarcocele : by M. Rollet.

On the Destruction of Phagedenic Chancres by the actual cautery : by M. Rollet.

Inadequacy of the destruction of a Primary Infecting Chancre, in preventing Constitutional Syphilis : by M. Diday.

Researches on the General Eruptions produced by Vaccination : by MM. Sordet and Bonchard.

On Hypertrophic Tumors of the Skin, and especially Papillary Hypertrophies : by M. L. Ollier.

On the Destruction of Chancres, its mode of execution, its advantages and its limits : by M. A. Dron.

Experimental Researches on Chancres : by M. Larogenne.

Critical Review of Works of the past Year on Syphilis and Diseases of the Skin. F. J. B.

The Microscope in its Application to Practical Medicine. By Lionel Beale, M.B. F.R.S. Second edition. John Churchill, London, 1859. —Among those who have studied microscopy in its relation to practical medicine, Dr. Beale has deservedly taken a high rank. He has improved his excellent opportunities to the best advantage, and his publications show an ardent love for the branch of duty in which he excels.

The treatise before us is one of great value to the student in medical microscopy. It is comprehensive, and yet extends over less than four hundred pages.

In the first part of the work, the author gives very full instruction in the use of the microscope, explaining the different instruments required, the proper mode of preparing and examining specimens, and the various sources of error. The second part relates to "the microscopical character of tissues in health and disease ; of morbid growths and deposits; of the fluid products of disease, and of animal and vegetable parasites."

An excellent feature in the work, and one which greatly enhances its value, is the frequent description by the author of the reaction of chemical tests on morbid deposits. Chemistry must indeed occupy a prominent place in nearly all satisfactory examinations of diseased products, for the microscope often fails to explain the nature of lesions unless aided by this science.

But the quality which more than any other, in our opinion, renders this a book of great value, is the large number of woodcuts, two hundred and seventy-one, representing for the most part microscopical appearances, observed and drawn by the author himself. Such beautiful and accurate diagrams will render an inestimable service to those—and they are in a large majority—who have not had the advantages of instruction in microscopical studies.

There are, of course, deficiencies in this treatise, and remarks apparently, if not really, irreconcilable with those made by other observers; but each subsequent edition will no doubt be more full and accurate.

Traité de la Maladie Vénérienne, par J. HUNTER, traduit de l'Anglais, par le DR. G. RICHELOT, avec des additions par le DR. PH. RICORD; Troisième edition, pp. 560. Paris: J. B. Baillière et Fils. 1859.—M. Ricord appears to have taken no part in the issue of this recent edition of Ricord and Hunter, his portion of the work remaining precisely the same as in the previous edition. The only additions made are from the pen of the French translator, Dr. Richelot. The most important of these relates to the modern classification of chancres into simple and infecting, and contains a description of these two kinds of primary sores and their attendant buboes, derived from M. Fournier's edition of Ricord's Lectures on Chancre. This matter was added to the American edition, noticed in our last number, prior to the issue of the present French edition.

TARDIEU (A.)—*Etude Médico-Légale sur la Strangulation.* 8vo. pp. 90. Paris, 1859.—M. Tardieu is one of the most able writers in France on legal medicine. In this work he gives the results of his study of the subject of strangulation.

JAMES (J. H.)—*Practical Observations on the Operations for Strangulated Hernia.* 8vo. pp. 95. London, 1859.—This well-written monograph is based upon thirty-six operations for hernia, performed by the author, which are accurately tabulated. Of these, 22 were femoral; 14 inguinal and scrotal; deaths 14. The author discusses the various points of interest in this operation.

HEADLAND (F. W.)—*An Essay on the Action of Medicines on the System; or on the mode in which therapeutic agents introduced into the stomach produce their peculiar effects on the animal economy.* Third edition, revised and enlarged. 8vo. pp. 447. London, 1859.—No work on the employment of remedies has been received with more favor than that of Mr. Headland. The third edition has been thorougly revised by the author.

HASSALL (A. H.)—*The Urine in Health and Disease; or, a simple Explanation of the Physical Properties, Composition and uses of the Urine, of the functions of the Kidneys, etc.*, with 24 large engravings. 12mo. pp. 82. London, 1859.—This little volume is designed to assist the practitioner in the study of the urine and the urinary organs.

MACLISE (J.)—*On Dislocations and Fractures.* Part 8, containing plates 29, 30, 31, 32, and descriptive letterpress. London, 1859.—This fasciculus maintains the high character of the series. The plates illustrate fractures and dislocations of the femur, tibia, fibula and patella.

MALGAIGNE (J. F.)—*Traité d'Anatomie Chirurgicale et de Chirurgie expérimentale.* 2eme edit. Revue et considerablement augmentée. 2 vols. 8vo. pp. 1664. Paris, 1859.—The great work of Malgaigne is too well known to require any other notice than the announcement of a second edition.

LONGET, (F. A.)—*Traité de Physiologie.* Vol. 1. part 2 fasc. 2. *Absorption, Respiration.* Royal 8vo. pp. 285–682. Paris, 1859.—The second fasciculus of part 2, vol. 1, of Longet's Physiology has just appeared. The third and last fasciculus of this part, comprising *Circulation, Animal Heat, Secretions, Nutrition,* will be published at the end of the year.

CHASSAIGNAC (E.)—*Traité Pratique de la Suppuration et du Drainage Chirurgical.* (*A Practical Treatise on Suppuration and Surgical Drainage.*) 2 vol., 8vo. Paris, 1859.—In this elaborate work the author presents his views of suppuration, and the drainage of abscesses by tubes, etc. The novelty of the treatment, and the success which this surgeon claims, will render this publication attractive to the surgical reader.

COOPER (W. W.)—*On Wounds and Injuries of the Eye.* With colored plates. 1 vol. 8vo. pp. 330. London, 1859.—This work, by one of the most eminent English writers on the diseases of the eye, relates entirely to the injuries of this organ, and is of a thoroughly practical character.

DOBELL (H.)—*Demonstration of Diseases of the Chest, and their Physical Diagnosis.* With colored plates. 8vo. pp. 115. London, 1858.—The author has improved upon former writers by adding to the description of the physical signs of chest-affections, a series of colored plates, illustrating the different morbid conditions of the lungs. There are ten illustrations, each exhibiting several varieties of pulmonary disease, arranged under the heads of *Consolidation, Liquefaction, Excavations, Pleurisy, Pneumothorax.* The plates are taken from fresh specimens, are well executed, the coloring giving them all the appearance of reality.

DURAND–FARDEL, etc. *Dictionnaire Général des Eaux Minérales, et d'Hydrologie Médicale.* 1ere Livraison. 8vo. pp. 192. Paris, 1859.—This is a comprehensive dictionary upon mineral waters, and the various medicinal uses of water, and will be a valuable addition to the physician's library.

FOLLIN (E.) *Leçons sur l'Application de l'Ophthalmoscope au diagnostic des Maladies de l'Œil.* (*Lessons upon the Application of the Ophthalmoscope, to the Diagnosis of Diseases of the eye.*) Avec 2 planches. 8vo. pp. 114. Paris, 1859.—The importance which oculists now attach to the ophthalmoscope in the diagnosis of diseases of the deep structures of the eye, render such a manual as the one before us indispensable to the student in this department of practice.

PROCEEDINGS OF ASSOCIATIONS.

NATIONAL QUARANTINE AND SANITARY CONVENTION.

The third National Quarantine and Sanitary Convention met at 10 o'clock, April 27th, 1859, at the College of Physicians, corner of Fourth Avenue and Twenty-third street. Over one hundred persons were present at the opening of proceedings, among whom were many leading citizens and medical men of this and other States.

On motion of Frederick E. Mather, of New York, the Convention was temporarily organized by the election of Dr. Wm. M. Kemp, of Baltimore, and Charles H. Haswell, of New York, respectively, the President and Secretary of the last annual Convention, to the same positions, temporarily, of this.

Dr. Joseph M. Smith, of New York, made a brief speech, in which he gave a cordial welcome to the delegates.

It was moved and carried that a Committee be appointed to report permanent officers to the Convention.

The Committee was selected as follows: Ald. Silas Pearce, of Mass.; Dr. Edwin M. Snow, of Rhode Island; Prosper M. Wetmore, of New York; Mayor Bigelow, of Newark, N. J.; Dr. Lee W. Buffington, of Pennsylvania; Dr. James F. Wilson, of Delaware; Dr. Gilman, of Maryland; Dr. W. W. Wilson, of Virginia; Dr. John Darby, of Alabama; and Dr. Charles F. Force, of Dis. Columbia.

Mr. Wetmore, on behalf of the Committee on Nominations, then submitted the report of Committee, as follows:

For President—Dr. John H. Griscom, of New York.

For Vice-Presidents—The Hon. Frederick W. Lincoln, mayor of Boston; Dr. Edwin M. Snow, of Rhode Island; Dr. Jos. M. Smith, of New York; Dr. Isaac A. Nichols, of New Jersey; Dr. René La Roche, of Pennsylvania; Dr. James F. Wilson, of Delaware; Dr. Jacob W. Houck, of Maryland; Conway Whittle, of Virginia; Prof. John Darby, of Alabama; Francis Mohun, of the District of Columbia; Charles G. Cornell, President of the Board of Councilmen of New York; and Dr. Wm. A. Piper, of Pennsylvania.

For Secretaries—Charles H. Haswell, of New York; Dr. A. M. Bell, of Brooklyn; Dr. H. Sinclair Ash, of Pennsylvania; Dr. Eli D. Hinckle, of Maryland; Dr. Gabriel Grant, of New Jersey; and Dr. Henry G. Clark, of Massachusetts.

On motion, the nominations were acceded to unanimously.

The Secretary then distributed the printed report of the Committee on Quarantine of the last Convention.

On motion, the reports of the Committees on Quarantine and the Internal Hygiene of Cities, were made the special order for to-morrow morning.

On motion of Dr. E. Harris, a Committee to prepare business for the Convention was appointed.

The Chair appointed the following gentlemen as the Committee:

Drs. Harris, of New York; Jeffries, of Boston; Kemp, of Maryland; Darby, of Alabama; Nichols, of New Jersey; Force, of Washington, District of Columbia; Maberry, of Pennsylvania; Snow, of Rhode Island; Wilson, of Delaware; Baldwin, of New Jersey; Law, of Rhode Island; and Messrs. Ottarson, of New York; Parkhurst, of Newark; Henderson, of Baltimore; ex-Mayor Clickener, of Hoboken; Lovitt, of Norfolk; Mayor Rodman, of Providence, and Mayor Gregory, of Jersey City.

SECOND DAY.

Dr. Jeffries, of Boston, reported from the Business Committee, recommending the consideration of the second and third points of the report on Quarantine, viz.: "Have quarantines secured the objects for which they were intended? If not, the reasons of their failure;" and third, "What reforms are required to make quarantines more efficient and less burdensome?"

The report of the Business Committee was adopted, and the Secretary proceeded to read the report on Quarantine. The first part embracing a history of quarantine, was adopted by the convention without discussion. The second part, as to the failure of the quarantine systems, was then read. The report condemns the existing system of quarantine in emphatic language, as almost entirely useless, and exceedingly burdensome to the mercantile community.

Dr. McNulty, of New York, moved the adoption of that part of the report.

Dr. Guthrie, of Tennessee, thought that quarantine was protective only north of points where yellow fever could originate. He gave a brief history of the epidemic at Memphis, and its causes.

Dr. Tuthill, of New York, thought the report was of a rather dangerous character. Barbarous and restrictive as our quarantine has been, he had no doubt it had repeatedly saved New York and Brooklyn from the ravages of yellow fever.

Dr. Bell, of Brooklyn, said yellow fever was introduced into Brooklyn by the quarantine. It was confined to the quarantine storehouses and goods, and the streets adjacent. There was not a case which could not be traced to infected cargoes.

Dr. Harris, of New York, concurred generally with Dr. Bell. While he admitted that the yellow fever came from infected cargoes, yet he referred to cases in Brooklyn of unmistakable black vomit, where the disease could have only come through the atmosphere from sources of infection at the distance of several blocks. Imperfect as were our quarantine regulations, it may be that they prevented the city from being desolated by yellow fever.

On motion, the conclusions of the committee that "a judicious modification of the present unsound, ill-advised, and antiquated code of quarantine laws is absolutely necessary" were adopted as the opinion of the convention.

The third point in the report of the committee as follows, was then taken up and read:

III. That reforms are required to make quarantines more efficient and less burdensome.

Mr. Whittle, of Virginia, offered the following resolution:

Resolved. That the reception of the able reports by the Committee appointed at the last session of this Convention, is not to be regarded as an indorsement by this Convention of the theory of non-contagion, and the quarantine system being a failure.

Dr. James R. Wood, of New York, opposed the resolution. He moved the reference of the report back to the committee, to be amended and reported to the convention, with resolutions appended. The motion prevailed.

EVENING SESSION.

At half-past seven o'clock the session was resumed.

The special order of the evening, the report of the committee on the Internal Hygiene of Cities, was then taken up with immediate reference to the draft of an act submitted by the committee "for establishing general and local boards of health, and for other sanitary purposes." It recommends that the Governor and Senate of the States shall appoint five discreet men, three of whom shall be physicians, to be called a General Board of Health, to hold office for five years, to meet at such times as they shall deem expedient, and have their expenses paid out of the treasury of the States. It provides that they shall appoint a competent person who may also be a Registrar General, to be the Secretary and Actuary of the Board, also a competent physician, who shall be styled a Medical Health Officer, and a Surveyor and other officers which may be necessary to carry into effect the laws of the State. They are required to consider and decide upon sanitary questions submitted to them by the State, cities, towns, or local Boards of Health, to diffuse information on sanitary matters. The act authorizes the corporate authorities of various cities and towns to establish local Boards of Health, and to meet and enforce laws for promoting the sanitary interests.

The whole subject was laid upon the table for the present, in consideration of the late hour.

THIRD DAY.

The following resolution, offered by Dr. Alexander H. Stephens on Thursday, was taken up as the special order:

"In the absence of any evidence establishing the conclusion that yellow fever has ever been conveyed by one person to another, it is the opinion of this Convention that personal quarantine of cases of yellow fever may be safely abolished."

Dr. Stephens briefly supported his resolution by insisting on the theory that yellow fever was non-contagious.

Dr. Bell of Brooklyn supported the resolution. He perfectly agreed with Dr. Stephens that yellow fever was not contagious anywhere. The gentleman cited various cases in Vera Cruz, Pensacola, and elsewhere, in which his own experience proved that yellow fever could not be communicated from one person to another.

Dr. John W. Francis remarked that he had been acquainted with the theory of fevers for fifty years, and had read at least three hundred volumes on the subject. He had been acquainted with every case of yellow fever in New York from 1791, when the disease was described by Adams, down to the last returns received from Staten Island. He stood there to speak for great New York, and he hoped that as she was the first to establish quarantine in this country, she would not be the first to abandon it altogether. He proceeded to give a résumé of the history of yellow fever from the time it appeared in Barbadoes, in 1791, down to the present time, and gave it as his opinion that the yellow fever cases at Peck-Slip, in 1791, and again in 1793, were importations from abroad. In 1798–99, 1801, 1803, 1805 and 1822 (when the fever started at Rector street), all these visitations were importations. He would, therefore, start with the theory that yellow fever was an exotic, and did not belong to this climate. He scouted the idea that all fevers were one, and remarked that Americans generalized too much.

Dr. Stephens replied, defending his resolutions and the doctrine of non-contagion. He asserted that there had never been a single case, in this climate at least, of indisputable personal contagion.

Dr. Bell offered an amendment to the resolution providing that *fomites* of every kind be rigidly restricted.

Dr. Stephens accepted the amendment.

Dr. Harris, in advocating the resolution, stated that in 1856 there were at least fifty cases of yellow fever transferred from the most populous parts of the city to Quarantine, many of them throwing up black vomit on the way, in the streets of the city and on the ferry-boats; and yet no persons who came in contact with these persons, as nurses or otherwise, had been known to take the disease.

Dr. La Roche, of Philadelphia, stated facts in relation to yellow fever. He instanced the case of a bark which had landed at the wharf of Philadelphia. Shortly after the hatches were opened there were several cases of yellow fever in the immediate vicinity of the vessel, which spread and produced one hundred and eighty cases. While this was so, not one stevedore or person employed in discharging the cargo was taken sick, nor did one take it who took the vessel below and scuttled her. They had concluded, therefore, that the fever did not proceed from the bark.

Prof. Geo. B. Wood, of Philadelphia, said it had been conceded that the present system of quarantine did harm. It was an injury to the persons quarantined, by keeping them exposed to yellow fever, by detaining them in their business, and to places by interfering with their commerce. Now if yellow fever could not be communicated personally, then the injury could be at once removed, and persons be permitted to go on their way. A leading French physician had visited the West Indies, and had consulted every physician who had ever treated yellow fever, and secured their opinions, which were almost unanimously to the point that yellow fever was not personally contagious. In his own experience, he had been through several attacks of yellow fever in Philadelphia, and he had never known a case where it had been personally communicated, and he therefore believed that it could not be thus communicated any more than bilious fever.

Mayor Rodman was not ready to vote intelligently upon the question, and he suggested that a resolution like the following should be adopted as a compromise :

That we, the medical portion of this convention, are fully convinced in our own minds that there is no necessity of personal quarantine in cases of yellow fever. Still, while we express it as our views, we would, at the same time, not be understood throughout the United States in saying that we think it is for the interest of cities at the present time to adopt it in its fullness.

Dr. McNulty moved the adoption of the resolution of Dr. Stephens, modified by Dr. Bell, as follows :

Resolved, That, in the absence of any evidence establishing the conclusion that yellow fever has ever been conveyed by one person to another, it is the opinion of this convention that the personal quarantine of cases of yellow-fever may be safely abolished, provided that *fomites* of every kind be rigidly restricted.

The resolution was carried, by a vote of 70 yeas to 4 nays.

Dr. Kemp, of Md., in behalf of a minority of the committee to whom was referred the report on quarantine, for the purpose of adding resolutions, submitted the resolutions as follows :

Resolved, That the operations of quarantine should not be confined to the warm months of the year, inasmuch as a vessel arriving in mid-winter with smallpox or typhus on board, is as legitimate a subject for quarantine as one arriving in mid-summer.

Resolved, That the adoption, by the commercial nations, of a sound and well-digested code of marine hygiene, and of the necessary measures for insuring its strict enforcement, would tend greatly to alleviate the evils of the present system of quarantine, and promote the comfort of passengers and crew.

Dr. D. B. Read moved also the adoption of the following resolution :

Resolved, That this Convention appoint a committee to consider and report in what manner the foregoing resolution (of Dr. Kemp) may be most effectually carried out.

The resolutions were carried.

Dr. Kemp moved the adoption of certain modifications of the Report of the Committee on Quarantine, by which the sweeping denunciations of the present system were somewhat modified.

The motion prevailed, and the report, as modified, was adopted.

Dr. Stephens, of New York, offered the following resolution, which was adopted :

Resolved, That a committee of —— be appointed to report at the next meeting of the Convention specific regulations of quarantine, specially applicable to yellow fever, cholera, typhus fever, smallpox, having reference also to the variation which different localities require.

Dr. Clark, of Boston, then called up the report of the Committee on the Internal Hygiene of Cities. The several sections of the draft of the act appended were, with slight modifications, adopted.

The draft of ordinances for local Boards of Health, reported by the Committee on Internal Hygiene, was then taken up and discussed, and generally adopted. A certain portion was referred to a committee, with power to modify and perfect.

Dr. Harris, of the Business Committee, reported the following preamble and resolutions :

Whereas, The sanitary and economical interests of cities and large towns are directly, and in a very important manner, affected by the quality and condition of the various articles of food and the facilities for supplying them, and

Whereas. There are various other agencies and conditions incident to civic life, which have a direct and important influence upon the public and personal hygiene, and which, in our opinion, fall within the scope and functions of municipal and State regulations and control; therefore,

Resolved, That we recommend to the Convention that committees be appointed to investigate and report upon each of the following subjects at the next Sanitary Quarantine Convention:

1. A committee of three members to report upon food, its quality and condition in cities and large towns, and the facilities requisite for supplying the same, together with plans and suggestions for the proper location, arrangement of butchers' markets and *abattoirs*.
2. A committee of six members upon civic cleanliness, with plans for the proper disposition of offal, street cleansings, and night soil of cities.
3. A committee of three members to report upon the legal restrictions for the control of the sale of poisons and dangerous drugs.
4. A committee of three members to report upon architectural improvements with reference to personal and public hygienc.

The report and resolutions of the committee were adopted.

Mr. Viele, of New York, offered the following preamble and resolution:

Whereas, The carrying out of a proper system of drainage and sewerage in all incorporated cities is of necessity in the hands of the properly constituted authorities, and, as a consequence, beyond the control of private citizens, therefore,

Resolved, As the sense of this Convention, that the responsibility for all diseases and death caused by imperfect drainage or defective sewerage rests upon the corporate authorities of cities, and it is earnestly recommended to the authorities to thoroughly investigate and provide prompt remedies for the evils arising out of these causes.

The resolution was adopted.

On motion, Dr. Snow, of Rhode Island, was requested to continue his investigations on the question of Registration, and to report at the next annual Convention.

Gen. Wetmore moved that the proceedings of Convention be printed under the auspices of the authorities of the city of New York. The motion was carried.

FOURTH DAY.

Dr. J. Gilman, in order to awaken a more general interest in hygienic matters with the community at large, submitted the following preamble and resolutions:

Resolved, That the members of this Convention foster and encourage, as far as possible, the organization of Sanitary Associations in the several States, and especially in our large cities.

The resolution was adopted.

A communication was received from Dr. Jewell, of Philadelphia, submitting resolutions for the wide circulation of the Reports of External and Internal Hygiene, and urging the enactment of proper sanitary laws, the appointment of special Sanitary Commissions, etc.

Dr. Jewell's resolutions were adopted.

Motions were made for the publication of proceedings, etc.

On motion of F. E. Mather, Esq., the following resolution was adopted :

That a Committee be appointed by the President to inquire and report as to the organization and practical working of the Dispensaries in the cities of this and other countries, and as to their relation to public and personal hygiene.

On motion of Dr. E. Harris, a committee of three members was appointed to report upon those sources of malaria or miasmata that should be subject to the control of the State or municipal authorities.

After the usual vote of thanks to the officers of the Convention, and to the municipal authorities, the Convention adjourned to meet in Boston, June 14, 1860.

CONVENTION OF MEDICAL TEACHERS.

ASSEMBLED AT LOUISVILLE, MAY 2, 1859.

The Convention of Medical Teachers was called under the following resolution, adopted at the eleventh annual meeting of the American Medical Association, held at Washington City last year :

Resolved, That we recommend to all the medical colleges entitled to a representation in this body, that they appoint delegates especially instructed to represent them in a meeting to be held at Louisville on Monday, the day immediately preceding the convention of the American Medical Association for the year 1859, at ten o'clock in the morning, at such place as the committee of arrangements shall designate.

At the hour of 10, the Convention was called to order, and Prof. Dixi Crosby, of Dartmouth College, Hanover, N. H., was selected as chairman, and Prof. George C. Blackman, of Ohio Medical College, at Cincinnati, as secretary.

Some discussion then ensued as to the mode of organization, some wishing all medical professors present to act as delegates, and others desiring that each college should have a unit representation. The following resolution was submitted by Dr. David F. Wright, of Shelby Medical College :

Resolved, That all members of the Faculties of Medical Colleges now present shall be considered members of this convention, but that where more than one belongs to the same college, one of them alone shall vote in behalf of that institution.

On motion of Dr. A. H. Baker, of Cincinnati, the following substitute was offered and adopted :

Resolved, That a committee of three on credentials be appointed by the chair.

Under this resolution, Prof. Crosby selected Drs. Baker, Shattuck and Haskins, as the Committee on Credentials.

The Convention was then permanently organized by the reëlection of the temporary officers.

Dr. Wright's resolution, that members from Medical Colleges who are now present be permitted to take part in debates, but that each college have but one vote, was again taken up, considered and passed.

Dr. N. S. Davis offered the following, which was adopted :

Resolved, That a business committee of five be appointed by the Chair, to report propositions for the action of the convention.

The Chair appointed Drs. N. S. Davis, Gunn, Frost, Shattuck and Yandell. After a short recess, to enable this committee to report, they submitted the following through Dr Davis, the chairman :

1. *Resolved*, That this convention recognizes the great advantages to be derived from the action of the American Medical Association in prescribing the terms and conditions on which medical degrees shall be conferred, and licenses to practise medicine shall be granted ; and that an expression of opinion as to methods or periods of instruction from the American Medical Association should be received with deference and respect, and that all pains should be taken to enforce any rules and regulations recommended by that body.

2. *Resolved*, That this convention earnestly recommend the American Medical Association to adopt such measures as will secure the efficient practical enforcement of the standard of preliminary education adopted at its organization in May, 1847 ; and that the medical colleges will cheerfully receive and record the certificates alluded to in said standard, whenever the profession generally and the preceptors will see that students are properly supplied with them.

3. *Resolved*. That no medical college should allow any term of practice to be a substitute for one course of lectures in the requisition for graduation.

4. *Resolved*, That Hospital Clinical Instruction constitutes a necessary part of medical education, and that every candidate for the degree of Doctor in Medicine should be required to have attended such instruction regularly for a period of not less than five months during the last year of his period of medical pupilage.

5. *Resolved*, That every medical college should rigidly enforce the rule requiring three full years of medical study before graduation, and that the diploma of no medical college shall be recognized which is known to violate this rule.

Prof. Wright, of Nashville, moved that the resolutions of the report be considered *seriatim*—and, the first being taken up, he spoke at length in opposition to it, giving a history of the previous difficulties between the American Medical Association and the medical colleges. He could neither vote for such a resolution, nor could he take any future part in the proceedings of a convention which should adopt it.

Prof. Brainard, of Chicago, thought this convention was asked to take a step fraught with peril to the harmony of the profession and its best interests ; it should be met on the threshold and a solemn protest entered against it. This body did not represent the medical colleges of the country with unanimity—New York, Philadelphia and New Orleans, are not represented here, and he must consider their absence as a protest against the assumption of any power on the part of this body, or the American Medical Association, to dictate the terms on which the colleges should confer their degrees or receive their students. The admission of such a resolution would produce hostile factions, both in the profession and in the colleges, and could never receive the sanction of those who had independent, chartered rights to fall back upon. He was opposed to no true improvement in the medical profession, but he did object to shutting that door upon young men desirous of entering the profession through which we ourselves all had entered.

Without definite action on the resolution, the convention adjourned until 3 o'clock P.M.

AFTERNOON SESSION.

When the Convention reassembled, Dr. Bayless offered the following amendments to the first resolution :

1. To substitute in the second line the word "recommending" for "prescribing."

2. To strike out all after the words "deference and respect."

A long discussion ensued on the resolution. Prof. L. S. Joynes, of the Medical College of Richmond, Va., offered the following preamble and resolutions as a substitute for the resolutions from the Business Committee :

WHEREAS, It appears that a large proportion of the medical colleges of the United States are unrepresented in this convention, and no changes in the present system of education can be effectual unless adopted by the schools generally—

Resolved, That it is inexpedient at this time to take any action upon the proposition contained in the report presented by the Special Committee on Medical Education, at the last meeting of the American Medical Association.

Resolved, That with the view of obtaining a more general union in counsel and in action upon this important subject, this convention do now adjourn, to meet again on the day preceding the next annual meeting of the American Medical Association, at the place which may be agreed upon for said meeting, and that the several medical colleges in the United States be requested to appoint each one delegate to such adjourned meeting of this convention.

These resolutions were amended, at the suggestion of Dr. Wright, to include the appointment of a committee of five, to take into consideration, during the recess, the various matters referred to in the resolutions, and to report thereon at the adjourned meeting.

The vote was demanded on this by colleges, and resulted as follows :

Yeas—Shelby Medical College, Missouri Medical College, St. Louis Medical College, Oglethorpe Medical College, Ohio Medical College, Western Reserve Medical College, Kentucky School of Medicine, Medical College, Richmond, Atlanta Medical College, Rush Medical College—10.

Nays—Medical College, S. C., Medical College, Ga., Medical Department, University, Mich., University of Louisville, Cincinnati College of Medicine, Lind University, Iowa University, Medical College Memphis, Harvard University—9.

The substitute was declared adopted, yeas 10, nays 9, and so the convention stood adjourned until the day preceding the next annual meeting of the American Medical Association.

The chairman appointed the following committee under the above resolution : Drs. Yandell, Shattuck, Blackman, Campbell and Gunn.

TWELFTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

LOUISVILLE, KY., MAY 3d, 1859.—The Association convened in Mozart Hall, at 11 o'clock, A.M., and was called to order by the President, Dr. Harvey Lindsly, in the chair, supported by Vice-Presidents Drs. W. L. Sutton and T. O. Edwards. The other officers present were the Secretaries, Drs. A. J. Semmes and S. M. Bemiss, and Treasurer Casper Wister.

The President introduced Rev. Stuart Robinson, of Louisville, who opened the proceedings with prayer.

The chair then declared the Association duly organized, and announced as first in order of business the report of the Committee of Arrangements.

Dr. R. J. Breckinridge, chairman of this committee, reported.

Dr. J. B. Flint, chairman of a committee appointed by the State Medical Society of Kentucky to receive the American Medical Association, accompanied by Drs. W. L. Sutton, C. H. Spilman, W. S. Chipley, and W. C. Snead, came forward and addressed the Association in a few pertinent remarks of encouragement and welcome.

The following members were reported as the nominating committee:

New Hampshire, Dixi Crosby; Massachusetts, Solomon D. Townsend; Rhode Island, J. H. Eldridge; New York, D. M. Reese; New Jersey, A. N. Dougherty; Pennsylvania, R. K. Smith; Delaware, H. F. Askew; Maryland, G. W. Lawrence; District Columbia, Cornelius Boyle; Virginia, L. S. Joynes; North Carolina, Edward Warren, Jun.; South Carolina, J. M. Gaston; Georgia, John W. Jones; Alabama, J. B. Coons; Louisiana, S. O. Scruggs; Tennessee, E. B. Haskins; Kentucky, D. D. Thompson; Ohio, George Fries; Indiana, J. H. Brower; Michigan, William Brodie; Illinois, C. Goodbrake; Missouri, M. [illegible]. Linton; Iowa, D. L. McGugin; Wisconsin, C. B. Chapman; Army, Charles S. Tripler.

The President then appointed the following committee on voluntary essays: Drs. L. P. Yandell, of Kentucky, James Bryan, of Philadelphia, and C. G. Comegys, of Ohio.

Dr. Harvey Lindsly, the President of the Association, read his retiring address, which was listened to with marked attention, and was an eloquent tribute to the dignity of the medical profession and the importance of its improvements.

Dr Casper Wister, chairman of the Committee on Publication, read the annual report, and on motion of Dr. Sayre, of New York, the following resolutions appended to it were adopted:

Resolved, That hereafter every paper intended for publication in the Transactions must not only be placed in the hands of the Committee of Publication by the first of June, but it must also be so prepared as to require no material alteration or addition at the hands of the author.

Resolved, That authors of papers be required to return their proofs within two weeks after their reception, otherwise they will be passed over and omitted from the volume.

AFTERNOON SESSION, 3 O'CLOCK.—Dr. W. L. Sutton, one of the Vice-Presidents, took the chair in the absence of the President.

The Committee on Nominations, reported the following officers for the ensuing year:

President—Henry Miller, of Kentucky.

Vice-Presidents—H. F. Askew, Delaware; Charles F. Tripler, U. S. Army; L. A. Smith, New Jersey; Calvin West, Indiana.

Treasurer—Casper Wister, Pennsylvania.

Secretary—S. M. Bemiss, Kentucky.

The report was unanimously agreed to.

Dr. R. J. Breckinridge moved that the thanks of the Association be tendered to the retiring officers for the faithful and assiduous manner in which they have conducted the business committed to their charge, which was unanimously adopted.

Upon motion of Dr. Edwards, all applications for membership by invitation were referred to the Committee of Arrangements and Credentials.

Dr. J. B. Lindsly, of Tennessee, offered the following:

Resolved, That a committee of three be appointed by the chair to inquire into and report upon the propriety of dividing the Association into sections for the purpose of performing such parts of its scientific labors as may relate to particular branches of medicine and surgery.

Dr. Brainard explained at some length the object of the resolution of inquiry, and urged its adoption as the means of giving more effect and usefulness to the proceedings of the Association, the reports of which had heretofore gone out unmatured, in consequence of the want of concentrated action.

The motion of Dr. Lindsly was adopted.

The Chair appointed as the committee, Dr. Lindsly, of Tennessee, Dr. Brainard, of Illinois, Dr. G. C. Blackman, of Ohio.

The following report from the Committee on Medical Ethics was read, and such portion of it as related to the action of the Dubuque Medical Society in the case of an expelled member, was, on motion of Dr. T. O. Edwards, made the special order for 12 M. to-morrow.

To the American Medical Association:

The Committee on Medical Ethics beg leave to state that, of the subjects referred to them at the last meeting of the Association, they find the following notice in the minutes:

"Dr. Grant, of New Jersey, presented a complaint made by the Newark Medical Society against the New York Medical College, for a violation of the ethics of the profession. Dr. Edwards, of Iowa, presented a similar complaint; and Dr. Oakley, of New Jersey, a complaint from the Union and Essex County Medical Society."—*Transactions*, vol. xi., p. 41.

Upon these several complaints your committee beg leave most respectfully to report:

That the two complaints from the Medical Societies of New Jersey refer only to one and the same grievance, the particulars of which are set forth in a memorial which was presented to the American Medical Association on the 6th of May, 1858, and which is entitled, "Statement of the Newark Medical Association in reference to a Diploma granted by the New York Medical College."

The facts stated in the memorial which is now appended to this report, were, during the last annual meeting of the American Medical Association, examined as carefully as time and opportunity would allow. The charges therein contained against the New York Medical College were admitted to be true by Dr. Horace Green, President of said College, who, in apology for the same, submitted a written statement to your committee, which was at the time accepted as satisfactory by the gentlemen then present before your committee on behalf of the parties aggrieved; and being afterward presented with a verbal report by the committee was received and entered upon the minutes in the following terms:

"Whereas, it appears from undoubted testimony that the New York Medical College have conferred the degree of Doctor of Medicine upon a notorious quack of the name of John F. Dunker, of Newark, the faculty, in the person of the President of said College, wish here to declare that the degree was obtained under gross deception and false testimonials furnished by said Dunker and his friends, and they therefore revoke and annul his diploma, and declare said Dunker to be unworthy of patronage or support from authority conferred upon him by this diploma."—*Transactions*, vol. xi., p. 49.

These complaints being thus disposed of, your committee have only to add in reference to them that the memorial presented to the American Medical Association from the Newark Medical Association is worthy of special notice, as setting forth the negligent manner in which mere verbal and hearsay statements are at times accepted in place of authentic written testimonials, from individuals presenting themselves as candidates for the honors of our profession at some of the medical colleges of this country. In this respect there is reason to believe that the New York Medical College does not stand alone; and the publication of the accompanying memorial may be of service in putting a permanent check to this crying evil.

The only other complaint referred to your committee was that presented by Dr. Edwards, of Iowa, preferring a charge from the Dubuque Medical Society against one of her members, who had been expelled for an alleged infraction of the code of medical ethics. This complaint does not appear to be of such a character as to require abjudication here. It has, since the last annual meeting of the American Medical Association, been adjudged by the Iowa State Medical Society, [see transactions of the annual meeting of said society, published at Dubuque, Iowa, 1858,] and having been then settled in the State in which the parties reside, it should now be dismissed.

All of which is respectfully submitted.

JOHN WATSON, M. D., Chairman.

NEW YORK, April 28, 1859.

The Special Committee on Government Meteorological Reports made a report, written by Dr. R. H. Coolidge, of the U. S. Army, but read by Dr. Paul F. Eve, of Tennessee, which was referred to the Committee on Publication.

The committee appointed in May, 1857, on Criminal Abortion, submitted a report written by Dr. Storer, of Boston, which was read by Dr. Blatchford, of New York, and referred to the Committee on Publication. The following resolutions appended to this report were unanimously adopted:

Resolved, That while physicians have long been united in condemning the act of producing abortion at every period of gestation. except as necessary for preserving the life of either mother or child, it has become the duty of this Association, in view of the prevalence and increasing frequency of the crime, publicly to enter an earnest and solemn protest against such unwarrantable destruction of human life.

Resolved, That in pursuance of the grand and noble calling that we profess—the saving of human lives—and of the sacred responsibilities thereby devolving upon us, the Association present this subject to the several Legislative Assemblies of the Union, with the prayer that the laws by which the crime of procuring abortion is attempted to be controlled may be revised, and that such other action may be taken in the premises as they in their wisdom may deem necessary.

Resolved, That the Association request the zealous coöperation of the various State Medical Societies in pressing the subject upon the Legislatures of their respective States, and that the President and Secretaries of the Association are hereby authorized to carry out by memorial these resolutions.

SECOND DAY.

WEDNESDAY, MAY 4, 1859.—The President, Dr. Miller, called the Association to order at 9 o'clock.

Dr. Reese, Chairman of the Committee on Nominations, called attention to the fact that the committee could not act definitely until the place for the next year's meeting should be designated. He stated, also, that the Medical State Society of Connecticut had requested that an amendment to the constitution, proposed two years since, should be taken from the table, relative to the time of meeting.

It was moved by Dr. Blatchford, and seconded by Dr. Sayre, that the amendment to the third article of the constitution be taken up, which proposes to add after the words "first Tuesday of May," the words "or first Tuesday of June," and after the words "shall be determined," add the words "with the time of meeting." The amendment was adopted by a constitutional vote.

Dr. Reese called attention to the necessity of some radical change in the mode of appointing committees to prepare treatises on scientific subjects to be reported at the annual meetings. It had been seen, that on yesterday, a large majority of the committees made no reports, and did not even see proper to send in any communication explanatory of delay. The difficulty heretofore has originated in the mode of selection adopted by the nominating committee. It has been customary for gentlemen to hand in their names and the proposed subjects, on slips of paper, and the committee, without further investigation, have so published in the annual reports. Thus, it has happened that appointments have been most injudiciously made, and gentlemen to whom a special duty has been assigned, have been found to know less of that than any other subject. He therefore hoped that no committee of last year would be reappointed, or continued, from which no report had been had and no communication received.

On motion, the Nominating Committee was unanimously instructed to act upon the suggestions of the chairman, who also stated that there should be some definite expression of disapprobation as to the course of these gentlemen who had volunteered essays, and had their names reported in the newspapers and spread over the land, and then paid no attention to the matter.

Dr. Flint, from the Committee on Prize Essays, begged leave to report that they received four dissertations in time for a careful and thorough examination, and two others, quite voluminous, only two days before the meeting of the Association. The latter we have felt constrained to exclude altogether from the competition of the present year, on account of the absolute impossibility of reading them with a critical purpose and effect. The others have been carefully examined by all the surviving members of the committee—one estimable associate, Dr. Evans, having been called from all his earthly labors before the active duties of the committee began.

More than one of the four essays we examined, exhibited much labor, and a commendable scholarship in their preparation—are voluminous, and in some respects very meritorious papers ; but in the unanimous judgment of the committee, neither of them possesses the degree and species of merit which should entitle its author to the Association prize.

The committee beg leave furthermore to report, that in their opinion, and as the suggestion of their own recent experience, the Association should determine, in more precise and formal manner than has yet been done, the terms and conditions of competition and of success in the contest for prizes, for the government alike of contestants and the committee of adjudication, and that a committee be now appointed to consider and report upon that subject.

Dr. Gordon, Chairman of Committee on Etiology and Pathology of Cholera, made a partial report, and asked continuance of time.

On motion, the report was accepted, and referred to Committee on Publication, and petition for continuance referred to Nominating Committee.

Dr. J. B. Lindsly, chairman of the committee appointed to inquire into the propriety of dividing the Association into sections for the better performance of its work in considering the various branches of medicine and surgery, recommended the adoption of such a plan as being indispensably necessary to making this body a working scientific association. They do not deem it necessary to enter into any argument in favor of this plan, it being the one already universally adopted by similar bodies. They would simply recommend, for the present, a division into the following sections, as being most suitable to facilitate the transaction of business, viz.: 1. Anatomy and Physiology; 2. Chemistry and Materia Medica; 3. Practical Medicine and Obstetrics; 4. Surgery.

The committee do not propose that this subdivision of labor shall in any manner interfere with the regular business of the Association as now conducted; but only that after having assembled each day in general session, each section shall meet separately for the purpose of hearing and discussing papers on such subjects as properly belong to them, and they therefore recommend that the Committee of Arrangements for the ensuing year, be requested to provide suitable accommodations for the services of these sections, and that each of said sections shall be authorized to make such arrangements as may be required for the proper transaction of its business.

This report was considered and adopted.

Dr. J. W. Singleton of Ky., moved the suspension of the rules for the introduction of the following:

Resolved. That in the death of Dr. A. Evans, of Kentucky, the Association has lost one of its most manly and efficient members, and society a friend and benefactor.

The resolution was unanimously adopted.

Dr. W. L. Sutton, under the resolution appointing a committee on registration of birth, marriages, etc., proposed a plan of general action, an abstract of which he read, on motion of Dr. Gibbes, of South Carolina; and, on motion of Dr. L. P. Yandell, the subject was referred to a committee, to report during the present session.

Drs. W. L. Sutton, J. B. Lindsly, R. W. Gibbes, Jr., James Bryan, Z. Pitcher, and G. C. Shattuck, were appointed such committee.

A report from Dr. Thomas M. Logan, of California, on Medical Topography and Epidemics, was received, and referred to the Committee on Publication.

The chairman of the Committee on Voluntary Essays, stated that he had received a paper on a case of extra-uterine fœtation, from Dr. Enos Hoyt, of Transylvania, Mass., and another on a case of accidental poisoning by strychnia, from Dr. Douglas Bly, of Rochester, N. Y. He also presented a very voluminous paper, entitled "Observations on some of the changes of the Solids and Fluids in Malarial Fever, by Joseph Jones, Professor of Medical Chemistry in the Medical College of Georgia, at Augusta."

By request, Prof. Jones gave a verbal abstract of his paper, and an exposition of his theory, and on motion of Dr. D. W. Yandell the communication was referred to the Committee on Publication.

Dr. J. B. Flint offered the following resolution :

Whereas, Our brethren of Great Britain are engaged in erecting a monument to the memory of John Hunter, whose invaluable services in behalf of Physiology and Surgery are recognized and honored, as well on this side of the Atlantic as in Europe; and whereas, this Association, as the representatives of American Medicine, would rejoice in some suitable manner to participate in so grateful a testimonial of gratitude and respect; therefore,

Resolved, That a committee of three be appointed to consider in what manner this participation can best be effected, so as to be acceptable to our British brethren, and consistent with our own means and opportunities of action, with instructions to report at the next annual meeting.

The resolution was adopted, and Drs. Flint, Bowditch, and Shattuck appointed as the committee.

Dr. Harvey Lindsly offered the following:

Whereas, Parliamentary rules of order are numerons, complicated, sometimes obscure, and often inapplicable to such a body as the American Medical Association; and whereas, from the nature of the pursuits of medical men, they cannot be familiar with these rules; therefore,

Resolved, That a select committee of three members be appointed to prepare a system of rules for the government of the Association, as few in number, as concise, and as perspicuous as possible, to be reported at the next annual meeting.

This resolution was adopted, and Drs. H. Lindsly, C. G. Comegys, and T. W. Blatchford, appointed as a committee.

The Nominating Committee made the following report:

The next annual meeting to take place at New Haven, on the first Tuesday of June, 1860. Dr. Eli Ives to be junior secretary.

Committee of Arrangements.—Drs. Chas. Hooker, Stephen G. Hubbard, and Benjamin Silliman, jr., with power to add to their numbers.

Committee on Prize Essays.—Drs. Worthington, Hooker, Conn.; G. C. Shattuck, Mass.; Usher Parsons, R. I.; P. A. Jewett, Conn.; and Jonathan Knight, Conn.

Committee on Publication.—Drs. F. G. Smith and C. Wister, Philadelphia, Pa.; S. M. Bemiss, Louisville, Ky.; E. Ives, New Haven, Conn; Hollingsworth and Hartshorne, Philadelphia, Pa.; and Askew, Wilmington, Del.

Committee on Medical Literature.—Drs. Henry Campbell, Ga.; D. F. Wright, Tenn.; O. Wendell Holmes, Mass.; S. G Armor, Ohio, and W. H. Byford, Ill.

Committee on Medical Education.—Drs D. M. Reese, N. Y.; W. K. Bowling, Tenn.; Chas. Fishback, Ind.; John Bell, Penn.; Z. Pitcher, Mich.

The following Special Committee were appointed :

On Morbus Coxarius, and Surgical Pathology of Articular Inflammation.—Dr. Lewis A. Sayre, of New York.

On the Surgical Treatment of Strictures of the Urethra—Dr. James Bryan, of Philadelphia.

On Drainage and Sewerage of Large Cities, their Influence on Public Health.—Dr. A. J. Semmes, D. C., chairman, Cornelius Boyle, and G. M. Dove.

On Puerperal Tetanus, its Statistics, Pathology, and Treatment.—Dr. D. L. McGugin, of Keokuk, Iowa.

On Hospital Epidemics—Dr. R. K. Smith, of Philadelphia.

On Puerperal Fever.—Dr. S. N. Green, of Stilesville, Ind.

On Anæmia and Chlorosis.—Dr. H. P. Ayres, of Fort Wayne, Ind.

On Veratrum Viride.—Dr. James B. McCaw, of Richmond, Va.

On Alcohol, its Therapeutical Effects.—Dr. J. R. W. Dunbar, of Baltimore, Md.

On Meteorology.—Dr. J. G. Westmoreland, Atlanta, Ga.

On Milk Sickness.—Dr. Rob't Thompson, Columbus, Ohio.

On Manifestations of Disease of Nerve Centres.—Dr. C. B. Chapman, of Wisconsin.

On the Medical Topography of Iowa.—Dr. T. O. Edwards, Iowa

On Microscopic Observations on Cancer Cells.—Dr. Geo. D. Norris, Newmarket, Alabama.

On the Philosophy of Practical Medicine.—Dr. James Graham, Cincinnati, Ohio.

On Some of the Peculiarities of the North Pacific, and their Relation to Climate.—Dr. Wm. H. Doughty, Ga.

The following Special committees were continued or altered :

On Microscope.—Drs. John C. Dalton, jr., N. Y.; David Hutchinson, Ind.; A. R. Stout, Cal.; Calvin Ellis, Mass., Christopher Johnston.

On Diseases and Mortality of Boarding-Schools.—Dr. C. Mattingly, Ky.; and Dixi Crosby, N. H.

On the Various Surgical Operations for the Relief of Defective Vision.—Drs. M. A. Pallen, Mo.; T. J. Cogley, Ind.; and W. Hunt, Penn.

On the Blood Corpuscle.—Dr. A. Sager, Michigan.

On American Medical Necrology.—Dr. C. B. Cox, Maryland.

On the Hygienic Relations of Air, Food, and Water, the Natural and Artificial Causes of their impurity, and the best methods by which they can be made most effectually to contribute to the Public Health.—Dr. C. B. Cox, Maryland.

On the Effect of Virus of Rattlesnakes, etc., when introduced into the system of Mammalia.—Dr. A. S. Payne, Virginia.

On the Climate of the Pacific Coast, and its Modifying Influences upon Inflammatory Action and Diseases generally.—Dr. O. Harvey, California.

On the Constitutional Origin of Local Diseases, and the Local Origin of Constitutional Diseases.—Drs. W. H. McKee, of North Carolina, and C. F. Heywood, of New York.

The Association took up the special order, being the report on Medical Ethics, to which had been referred the action of the Dubuque Medical Society, which, after debate, was laid over until 12 o'clock tomorrow.

On motion of Dr. H. F. Campbell, a section of meteorology, medical topography, and epidemic diseases, and of medical jurisprudence and hygiene was added to those already adopted by this Association.

The Association then proceeded to consider and act upon amendments to the Constitution proposed at the last annual meeting and laid over under the rules. The following amendment was adopted:

Resolved, That the Constitution of this Association be so amended as to provide, that no individual who shall be under sentence of expulsion or suspension from any State or Local Medical Society, of which he may have been a member, shall be received as a delegate to this body, or be allowed any of the privileges of a member, until he shall have been relieved from the sentence by such State or Local Society.

The next amendment lying over from last year, was the proposition of Dr. Kyle, of Ohio.

That the Constitution of the Association be so amended as to prohibit the admission as a delegate or the recognition as a member of any person who is not a graduate of some respectable medical college.

This amendment was rejected, but, on the question of reconsideration, a long and animated debate ensued. Without arriving at a vote, the Association adjourned for dinner.

Afternoon Session.—The Association was called to order at 3 p.m., Dr. H. F. Askew in the chair. The discussion on the amendment under consideration at the hour of adjournment was renewed.

Dr. Kincaid moved a further amendment to insert the word "hereafter" after "prohibiting."

The Chair ruled the amendment out of order at the present stage, or until the Association decides upon the question of reconsideration.

After a long discussion, Dr. Davis, of Indiana, moved to lay the motion to reconsider on the table, which was carried, 97 yeas, nays not counted, so the amendment stands registered.

The next proposed amendment to the Constitution was that suggested by the New Jersey Medical Society, asking for such changes as would establish a Board of Censors in every judicial district of the Supreme Court, who should examine and grant diplomas to all proper members of the Association.

This was temporarily laid on the table for Dr. Crosby to offer a report of the Medical Teachers' Convention which met on Monday last. He strongly recommended a committee from this body to confer with the Teachers' Committee, and felt great confidence that something beneficial to medical education would be the effect of such conference.

Dr. Comegys moved the appointment of a committee of five to committee of Medical Teachers and report at the next annual meeting, provided that no Medical Teacher be selected on the part of this Association.

Dr. T. M. Blatchford, of New York, offered as a substitute the following preamble and resolution:

Whereas, Of all the subjects which can engage our attention in our associate capacity, that of Medical Education is paramount; and Whereas, harmony of action is essential to success in establishing definite qualifications entitling to admission in our ranks; and Whereas, nothing can be gained by hasty action in a matter so vital to our very existence, as a permanent Medical Institute. Therefore,

Resolved, That further action be suspended for the present upon the subject of the resolutions offered at the last meeting of the Association, by the Chairman of the special committee on Medical Education, and that a committee, consisting of S. W. Butler, of Pennsylvania, L. A. Smith, of New Jersey, Dixi Crosby, of New Hampshire, C. A. Pope, of Mo., and T. Buckler, of Maryland, shall be appointed to confer with the committee appointed at the meeting of Medical Teachers, to report some plan for action at the next meeting of the Association.

This amendment was lost, and the original resolution adopted.

The resolutions from the New Jersey Medical Society were then taken from the table and referred to the Committee of Conference.

Dr. Davis offered a resolution instructing the same committee to confer with the State Medical Societies for the purpose of procuring more decisive and uniform action throughout the profession in carrying into effect the standard of preliminary education adopted by this Association at its organization in 1847. This was carried.

Dr. Gibbes, from the committee to examine into a plan of uniform registration of births, marriages, and deaths, offered the following report:

They have given the same a careful consideration, and they unanimously recommend that the report be adopted and referred to the Committee on Publication.

They also recommend that the same Committee be continued, with instructions to add to the Report in time for publication in the ensuing volume of Transactions a form of registration law which may be likely to answer the requirements of the several States.

Dr. Sayre, of New York, offered the following:

Whereas, The medical profession at large have an interest in the character and qualifications of those who are to be admitted as their associates in the profession: therefore,

Resolved, That each State Medical Society be requested to appoint annually two delegates for each college in that State, whose duty it shall be to attend the examination of all candidates for graduation: and that the colleges be requested to permit such delegates to participate in the examination and vote on the qualifications of all such candidates.

This was, on motion, referred to the committee of conference.

The paper of Dr. Jones, presented at the morning session, was taken from the Committee on Publication and referred to the Committee on Prize Essays.

Dr. Eve moved to record the name of Dr. Benj. W. Dudley as a permanent member, which was adopted by a unanimous vote, the delegates all rising to their feet in token of respect.

THIRD DAY.

Thursday, May 9, 1859.—The President called the Association to order at 9 o'clock, and the reading of the minutes of yesterday was dispensed with.

The first business in order was an amendment to the Constitution, laid over from last year, and proposed by Dr. T. L. Mason, of New York, to insert in the first line of the second paragraph of Article 2, after the words "shall receive the appointment from," the words, "any medical society permanently organized in accordance with the laws regulating the practice of physic and surgery in the State in which they are situated, and consisting of physicians and surgeons regularly authorized to practise their profession."

Also, to add to the sixth paragraph of the same article the words, "but each permanent member of the first class designated in this plan of organization shall be entitled to a seat in the Association on his presenting to this body a certificate of his good standing, signed by the Secretary of the Society to which he may belong at the time of each annual meeting of this body."

Dr. Lyndon A. Smith, of New Jersey, said amendments to the Constitution should be adopted with care, and though, perhaps, that now proposed might be desirable, still, as Dr. Mason, who had proposed it, was not present to explain his views, he moved that the subject be laid over until next year. This suggestion was adopted.

Another constitutional amendment, proposed by Dr. Henry Hartshorne, of Pennsylvania, and laid over from last year under the rules, provides to add to the second article the words, "No one expelled from this Association shall at any time thereafter be received as a delegate or member, unless by a three-fourths vote of the members present at the meeting to which he is sent, or at which he is proposed."

This amendment was adopted.

Another amendment proposed by J. Berrien Lindsly, of Tennessee, was called up, to omit in Article 2, the words, "medical colleges, hospitals, lunatic asylums, and other permanently organized medical institutions in good standing in the United States;" and also to omit the words, "The faculty of every regularly constituted medical college or chartered school of medicine shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital containing a hundred inmates or more shall have the privilege of sending two delegates, and every other permanently organized medical institution of good standing shall have the privilege of sending one delegate."

This was laid on the table until the next annual meeting.

Dr. McDermot submitted the following resolutions:

Whereas, a vast proportion of the disease and misery that afflict our race is caused by the excessive use of intoxicating liquors. and whereas, in the opinion of this Association, the evils of intoxication can be most effectually remedied by the establishment of Inebriate Asylums, wherein the victims of intemperance may be subjected to such restraints and treatment as shall effect a thorough reformation of their habits; therefore,

Resolved, That this Association recommend the establishment of Inebriate Asylums in the various States of the Union.

Resolved, That the State and County Medical Societies and all members of the medical profession be requested to unite in diffusing among the people a better knowledge and appreciation of the beneficent purposes and important benefit that would be conferred upon society by the establishment of such Asylums throughout the various sections of the country.

This resolution was referred to the mover as a special committee, with a request that he would report thereon at the next meeting of the Association.

Dr. Shattuck offered the following, which was adopted:

Resolved, That the committee appointed in May, 1857, on Criminal Abortion, be requested to continue their labors. and especially to take all measures necessary to carry into effect the resolutions reported by them on the first day of the meeting.

Dr. Yandell, from the Committee on Voluntary Essays, made a further report, that a communication had been received from Dr. Sanger, of Iowa, on Subcutaneous Injections as remedials, which, on motion, the author read.

The essay was referred to the writer as a special committee, with the request that he would report further at the next annual meeting of the Association, and continue his investigations.

The President appointed as the Committee of Conference to meet the committee from the Teachers' Convention, the following gentlemen:

Drs. Blatchford, Troy, N. Y.; Condie, Philadelphia, Pa.; Bozeman, Montgomery, Ala.; Brodie, Detroit, Mich., and Sneed, Frankfort, Ky.

The Nominating Committee made the following final report:

Special Committees continued.

On Quarantine—Drs. D. D. Clark, Pa.; Snow, R. I.; Jewell, Pa.; Fenner, La., and Houck, Md.

On Medical Ethics.—Drs. Schuck, Pa.; Murphy, O.; Linton, Mo.; Powell, Ga.; Eve, Tenn.

On Tracheotomy in Membranous Croup.—Dr. A. N. Dougherty, N. J.

The Effects of the Perineal Operations for Urinary Calculi upon Procreation in the Male.—Dr. J. S. White, Memphis, Tenn.

On Mercurial Fumigation in Syphilis.—Dr. D. W. Yandell, Louisville, Ky.

On the Improvements in the Science and Art of Surgery, made during the last half century.—Dr. Jos McDowell, St. Louis, Mo.

On the Cause and Increase of Crime and its Mode of Punishment.—Dr. W. C. Sneed, Frankfort, Kentucky.

On the Education of Imbecile and Idiot, Children.—Dr. H. P. Ayres, Fort Wayne, Ind.

On the Uses and Abuses of the Speculum Uteri.—Dr. C. H. Spilman, of Kentucky.

On the Topography of Vermont.—Dr. Perkins, of Vermont.

On the Pons Varolii, etc.—Drs. S. B. Richardson, of Kentucky, and Fishback, of Indiana.

On the Physiological Effects of the Hydro-carbons.—Dr. F. W. White, of Illinois.

Honorary resolutions were passed to the memory of the following members of the Association, deceased:

Dr. W. M. Boling, of Alabama; Dr. Thomas D. Mütter, of Pennsylvania; Dr. P. C. Gaillard, of South Carolina; D. Jabez G. Goble, of New Jersey; Dr. John K. Mitchell, of Pennsylvania.

Dr. R. K. Smith, of Philadelphia, submitted the following:

Resolved, That the death of Dr. John K. Mitchell, one of the members of this Association, has been to this body a loss keenly felt by every man who knew him. His eminence as a teacher, his varied acquirements in every department of learning, and his generous social qualities in every relation, endeared him to every member of the profession who had the pleasure of his personal acquaintance.

Resolved, That the family be notified of the action of this Association.

Dr. Sayre offered the following, which were adopted by acclamation:

Resolved, That the thanks of the American Medical Association are eminently due and are hereby presented to the citizens of Louisville, Ky., for the princely hospitality publicly and privately extended to the members of this body during its present session.

Resolved, That to the Committee of Arrangements, and the Profession of Louisville generally, our thanks are due for their kind and assiduous attention to the Association, and for the hearty welcome with which they have greeted our Convention in their flourishing city.

On motion of Dr. Davis, the Association adjourned to meet at New Haven on the first Tuesday in June, 1860.

CORRESPONDENCE.

Amputation in spreading traumatic gangrene, By Rufus H. Gilbert, M.D., of New York.—The expediency of amputation in spreading gangrene, is generally doubted both by the profession in this country and Europe—and the few who justify the operation can adduce but little if any written authority in its favor.

In the September number, 1852, of the *New York Journal of Medicine*, there is a summary of fifteen cases of amputation of the lower extremities, reported by Dr. John O. Stone, then one of the surgeons of Bellevue Hospital, in which the mortality of both primary and secondary operations was 46⅔ per cent. and he concludes his article with saying: "We had for some time suspected that amputation in *all* cases was a formidable alternative, and in view of the awful mortality after primary amputations, we are tempted to ask if it would not be wise to refuse to operate in all cases of severe injury."

The following case, among others in my practice, is an instance of the possibility of success in a most hopeless case, and I would offer it as a slight contribution to statistical knowledge, to aid in solving the question, which Dr. Stone pertinently asks in the commencement of his article, "How far amputation is to be recommended as a means of cure?" and lighten a picture a trifle in which the dark shades preponderate.

I was called in June, to see Mr. S. Robinson, a conductor, who was injured in consequence of the cars being thrown from the track, near Mansfield, Pa. He was standing at the time of the accident between the engine and tender, and received his injuries by his limbs being crushed between them, and the wood from the tender, which completely covering him, produced severe injuries, and punctured wounds of the back, which were afterward very troublesome. In addition to this, the left knee was dislocated backward, a rib fractured upon the left side, and a lacerated wound of the right leg, extending from the tuberosity of the tibia three-quarter way down to the foot, tearing the muscles from their origin, and penetrating the interosseous membrane, dividing the anterior tibial artery and nerve, was produced by a sharp stick.

This rather lengthy bill of fare was inflicted upon a person suffering from dyspepsia, and health much impaired otherwise, the result of long confinement in the machine shop, where he was employed at his trade, and from which he had been liberated but a few days before, hoping by the change to improve it. I did not see him until 12 o'clock at night, ten hours after the occurrence, of the accident—he had been attended by the physicians of the place, the dislocation of the knee reduced, the torn and lacerated muscle had been returned to its pocket-like wound, which was held together by strips of adhesive plaster, completely encircling the limb (as I afterward learned), over which were applied cloths wet in ice-water, to keep down an inflammation, which with severed arteries and nerves, was not very likely to occur. Brandy had been administered at first, and subsequently morphine, to relieve the pain, which was very severe. I suggested no change in the treatment then, but the discontinuance of the cold applications. At four A.M., the pain was so severe that I was called to give something to relieve pain; the limb being examined, it was found cold and livid below the wound, the knee-joint being swollen, œdematous and discolored, his pulse quick and feeble. Morning found the limb in a state of sphacelus, and the adjoining part rapidly taking on the morbid action. The accommodations were such where he then was, that it was deemed advisable to remove him to his home, a distance of thirty miles; he was accordingly carried upon a cot bed and placed upon the train, which was run at low speed; although some fatigued, he was not injured by the journey, the pure air seeming to revive him.

The constitutional symptoms were now showing themselves in great general depression; pulse 140, quick and feeble, surface cool, with moisture, vomiting and hiccough—the exhalations from the limb intolerable.

The treatment through the night was as follows: for quieting pain, and controlling vomiting, a teaspoonful of the following formulary every half hour—

Tinct. Cardamom. }
Aquæ Cinnam. } aa. ℥ j.
Morphiæ sulp. grs. ij.
Misce.

Brandy and quinine. in small doses, frequently repeated, with beef tea as nourishment, when the stomach would retain it. Locally, charcoal and yeast poultices were applied, and the part near the gangrene painted with strong tinct. iodine with creasote. Sinapisms upon the extremities and over the stomach. It was hoped that the progress of the gangrene would be arrested by those means, but in this we were disappointed. It moved steadily up the thigh, with no signs of abatement. A consultation was held at an early hour in the morning, resulting in the unanimous conclusion that amputation was the only chance. This operation was opposed, believing that it would only hasten death. This opinion seemed well founded and substantiated by Miller, in his "Principles," the best authority, who says, "the only hope of escape is in early amputation—it's a slender chance, for the probability is that the sinking may continue or even gangrene be renewed; but it is the only one, and to it the patient is entitled. While the mortification is spreading, then, we may amputate at a distance from the gangrened part in one which is sound or appears to be so—*if there be no point altogether free from incipient death*, we refrain from the knife. its use must then prove futile and would but accelerate the fatal issue."

Unfortunately there was no such point in this case—the highest place where amputation could be performed was already invaded by the disease (in the cellular tissue). The patient being anxious to avail himself of the only chance which amputation afforded. I adopted, in the place of the authority of Prof. Miller, the "I'll try" of our own Col. Miller, and proceeded to amputate the thigh at the highest point possible. chloroform having been administered by one of my assistants, Dr. W. D. Terbell, very slowly at first. The circular method was chosen as affording an opportunity of removing more of the infected parts. The hemorrhage was slight, the artery being controlled over the ilium by the thumb of an assistant. After the arteries were secured, and before the dressings were applied, the inflamed parts of the stump were painted with tinct. iodine and creasote, the constitutional treatment remaining the same. The erysipelatous inflammation extended up the stump, streaking up the trunk. but the gangrene was limited to the lower flap, half of which sloughed on the fifth or sixth day; after this the inflammation slowly subsided; the chloride of soda used as a dressing. The ligature became encysted and broke in an effort to bring it away, two months after. Convalescence was slow, a result of other severe injuries ; but he recovered his health, and is now officiating as magistrate in the village he resides in, which office he can fill quite as well with one, as two legs.

Were I to express an opinion, or lay down a principle, it would be —in all cases where death is inevitable on one hand, and there is a possibility of success upon the other, that it is the duty of the surgeon to give the patient the benefit of the chance, hopeless as it may appear, and that especially if he desires it. It is the duty of the surgeon to save life at any and all hazards, and no personal consideration or fear of censure or calumny should prevent him from its faithful discharge. The case related illustrates forcibly a principle upon which we should act with the spirit of Lawrence's " don't give up the ship," for we know not what success may crown our efforts in a case until we try. While we are vigilant to observe, we must act with promptness and dicision, remembering in these and all our efforts to save life, that " our sufficiency is of God and not of ourselves."

Case of fallopian pregnancy—Death resulting frcm rupture of the cyst. By WILLIAM PIERSON, M D., Orange, N. J.—I was called on Monday, April 18, 1859, at 7 o'clock, P.M., to see a lady about thirty-five years of age, supposed to be threatened with a miscarriage. She was English, of medium stature and good constitution. Stated that she had been pregnant four times within the last six years, but had never had a living child, nor carried one the full time. Two were carried about eight months, two six. She supposed herself at this time six weeks pregnant. Had been much engaged recently in house cleaning ; had, on the day I saw her, assisted in lifting a heavy stove and trunks. Ate her dinner as usual. About three o'clock was seized with severe pain in the lower part of the abdomen. An enema of warm water had been administered and hot fomentations applied. A large quantity of fecal matter was brought away, but without any abatement of the pain, which was very severe and paroxysmal—as she described it, very like the pains of labor. On my arrival, I found no distension nor tenderness of the abdomen, no discharge from the vagina, some thirst, pulse quite frequent. Patient seemed fully persuaded that she would miscarry, which had a very depressing effect upon her spirits. Not considering the symptoms of an alarming nature, I administered an opiate and left. In about three hours was again sent for, but as I had gone out of town, my father visited her in my stead. He found her much exhausted, in fact almost in a collapsed state. Pulse was very rapid and feeble, extremities cold, surface of body very pale, as though exhaustion was being produced by internal hemorrhage. Would frequently call out for assistance, and say, " Now I can feel the pains tearing down and I think you can help me." There was no discharge from the vagina nor any dilatation of the os uteri. Stimulants were administered and sinapisms applied, but to no purpose. The pains grew gradually less severe, and finally ceased, as she grew more and more feeble, fainting frequently, though she continued entirely conscious. Expired about one o'clock, A.M.

A post-mortem examination was made nine hours after death. Drs. Wicks and Truman were present. The surface of the body presented an extremely blanched exsanguine appearance, the abdomen slightly distended and tympanitic. In other respects, the body had the appearance of one who had died in perfect health. Upon opening the cavity of the abdomen, a quantity of thin, reddish-colored fluid escaped, and moving the intestines to one side, the pelvis was found to be filled with coagula, and the lower and back part of the abdominal cavity with blood, part in fluid and part in a coagulated state. By means of a sponge, at least six pounds of blood were removed. The colon was somewhat inflated, while the small intestines were smaller than usual. In the left fallopian tube was discovered an abnormal growth, which caused us carefully to remove the uterus and its appendages. The uterus was somewhat larger than in its normal state, measuring four inches in length, three in breadth, and one and a quarter in thickness. Its mouth was filled up with a gelatinous mucus, like what is usually secreted in the early months of pregnancy, and the cavity contained a perfectly formed deciduous membrane. The left ovary was longer than the right, and within was found a small encysted tumor; both were very pale in color. The right fallopian tube was normal in appearance, but in the left one, just above its junction with the womb, was a tumor of an oval form, an inch and a half in length, and an inch in width, of a dark red color. On its posterior surface was discovered a small rent, about two lines in diameter, through which protruded a transparent membrane, which, upon close inspection, proved to be part of an ovum containing a human embryo floating in the liquor amnii, with a placental attachment. The embryo was an inch in length and of a white color. Through this rent had poured the fatal hemorrhage. A human ovum had been arrested in the fallopian tube in its transit from the ovary to the womb, where it had attained the age of six weeks, and then the cyst had been suddenly ruptured, probably by the exertion of lifting heavy articles, thereby making a direct communication between the blood-vessels and the abdominal cavity. The cyst being the seat of gestation, had become highly vascular for the carrying on of the process of gestation. The placenta was attached near the opening, and veins were seen running to it and terminating abruptly, as though they had been torn across. Probably a portion of the bleeding was from these veins.

The small size of the opening in the cyst and the slowness of the current, account for the length of time the patient survived, and for the difficulty of coming to a correct conclusion until some hours had elapsed. Embryologists describe ten varieties of extra-uterine pregnancy, six of which are connected in some way with the fallopian tubes, and are much more frequently met with than the other varieties. The case we have just described was one of the simple tubular variety. It is peculiar in the fact of its occurring in the left tube, nearly five-sixths of reported cases having occurred in the right; also in the rupture occurring in so early a stage of pregnancy, for it had not existed more than six weeks, as was determined by the length of the embryo, and by the length of the time which had elapsed since the last menstrual period, and in the fact of its not having been attended by any bad symptoms previous to the rupture of the cyst.

Aneurism by anastomosis in the orbit, and spontaneous cure.—By C. K. Fiske, M.D., St. John's, New Brunswick.—Mrs. Charles Melick, aged forty, of fair complexion, sanguine temperament, medium stature, spare habit and the mother of several children, in March, 1848, being near her confinement, had severe pain in the left orbit and temple, and on applying cold water to the head to relieve the pain, felt a sudden snap, like the breaking of a cord or the snapping of a whip, which was followed by immediate protrusion of the globe, and great œdematous swelling of the lids and cellular tissues about the eye, and with loss of vision of the affected organ.

The swelling was reduced by treatment in a few days, but the globe continued to protrude, causing great deformity.

At the end of three weeks, there appeared a small pulsating tumor in the orbit just under the superciliary ridge, which soon increased to the size of a hickory nut, and the pulsation was so distinct as to be seen at several yards' distance from the patient.

The frontal veins became much distended, and the angular vein of the side of the nose was so turgid as to appear on the point of bursting. The circulation on the affected side of the face was greatly enlarged, and pulsation was noticeable in the veins; and to the patient, there was a constant whizzing noise in the ear, attended with various distressing sensations in the parts.

On carefully pressing my thumb upon the tumor, the enlarged veins would suddenly become collapsed, and on removing the pressure, would become turgid again. I also observed that compression of the left common carotid, immediately arrested the pulsation of the tumor.

I promised the patient a cure by the *ligation* of the carotid, to which operation she consented to submit, at any time I might think advisable; but her health being very delicate, I thought best to defer it for a few months, and it was put off from time to time for two years. At this time, by my request, she visited New York and consulted Dr. Mott, who advised her to have the operation performed at once. This, however, she declined, preferring to be at home among her friends, to undergo so dangerous an operation.

Soon after consulting Professor Mott, there were some favorable changes in the disease. The angular vein of the nose, which had been most turgid, becoming collapsed, and there was less thrill in the tumor.

I then thought best to further postpone the operation, to see what time might still do for her.

During the next four years, there was a slight increase in the size of the tumor, and I was occasionally called to relieve head symptoms, but nothing of importance occurred, till I was called in great haste to see her, as she was "very ill."

I found her suffering with great pain in the affected side of the head, and under much excitement, and much frightened.

On turning my attention to the tumor in the orbit, I found the pulsation in it had *entirely ceased*, and the distended veins had became collapsed.

I administered a mild cathartic of calomel, combined with extract of hyoscyamus and opium, and applied cold dressing to the head, and to dispel the fears of the patient, assured her that nature was working a cure more perfect than could be expected from an operation.

The pain in the head was relieved in a few hours, the whizzing sound ceased altogether, which had so long troubled her, and the pulsation in the tumor never returned, and in the course of three months it entirely wasted away.

What, for six years, had been a great deformity, and a cause of much distress, had, in a very short time, been entirely obviated, without the interference of art.

The eye was restored to its natural position, and but for the loss of vision in the affected organ, there were no remaining ill consequences.

I have had frequent opportunities to see the patient during the last three years, and she is quite restored to health, and has been able to travel to England and the Continent.

Report of Cases of Treatment of Curvature of Spine (continued). By J. A. Wood, M.D., of Boston.

Case 7.—*Pott's Disease.*—Mrs. N. H. Richardson of Woburn, Mass., aged 36 years, tall in stature, of light complexion, and of somewhat scrofulous diathesis, came under treatment for Pott's Disease of the Spine, July, 1858.

The following is a brief history of the case from its commencement to the time I first saw it, as related by the patient.

Eight years ago she was attacked with pulmonary disease unprovoked by a cold, characterized at first with a dry, hacking cough, which, at a subsequent period, became urgent, attended with copious expectoration, occasionally tinged with blood, emaciation and extreme prostration, with hectic and night sweats.

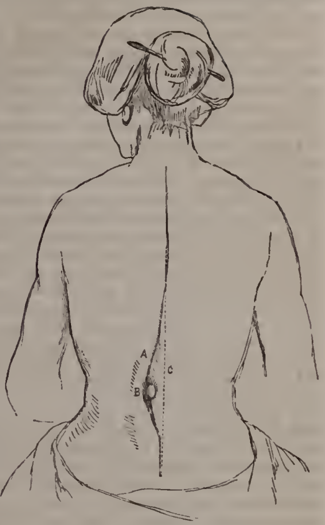
This sickness continued more than six months, and for many weeks during that period the attending physician and friends of the patient entertained little or no hope of her ultimate recovery.

While in this situation she first began to experience pain in the vicinity of the second and third lumbar vertebræ, with some degree of tenderness on pressure, which did not subside on her recovery from this severe sickness, but both continued with greater or less severity at times, soon accompanied with curvature of the spine which was quite apparent, even when the patient was standing, or walking about.

In April, 1857, the case assumed a more formidable character.

At that time, from some violent exertion on the part of the patient, in consequence of sudden fright, the pain was greatly increased and the curvature more rapidly developed than at any former period of the disease.

The difficulty progressed, and on examining the case in July, 1858, when my attention was first directed to it, I found the second and third lumbar vertebræ projecting posteriorly, as seen at B, in the



accompanying cut, about half an inch, forcing those directly above and below, more or less, from their normal position.

In connection with this posterior projection, there was also, a lateral reflection of the spinal column, to the left, embracing the lumbar, and several of of the lower dorsal vertebræ, as seen at A in the accompanying figure, which represents, *correctly*, the extent and degree of this lateral inclination of the spinal column.

The pain was severe in the back, hip, and left lower extremity, with a partial loss of power in that limb. The muscles were contracted, drawing the body to one side, rendering exercise difficult and painful.

The treatment was simply mechanical, and consisted in the application of a Spinal Apparatus, such as has been described in a former number of the *N. Y. Journal of Medicine*, appropriately adjusted and readjusted at such times and manner as the nature of the case demanded.

The usual instructions in regard to regimen in those cases were given, with the recommendation only, of *moderate* exercise.

The patient has fully recovered, with a *complete* reduction of the curvature, as seen at C in the above cut.

June 16, 1859.

EDITORIAL.

The advantages of New York for medical instruction.—The character of the population of the city of New York renders it necessary that a greater than the usual proportion of its people should be provided for, and in sickness taken care of, in its public institutions. These are doubtless much larger therefore, and more numerous than in any other city in the Union, and in them are presented more extensive materials for clinical instruction, which, we do not hesitate to say, will compare favorably with those of our sister cities in the thoroughness and ability with which they are made available to the student.

But besides these preëminent clinical advantages, these numerous large public charities require, each of them, a certain number of young men to fill the post of resident physicians and surgeons, and these are recruited every year from the ranks either of the advanced students or of the recent graduates of the city schools. The organization of these institutions is such, that the first medical and surgical talent is secured in a corps of attending physicians and surgeons, who take charge of the sanitary affairs of the house, and in particular superintend the treatment of the sick. Their orders are received and carried into execution by the young men who are acting as resident physicians and surgeons, who having thus the immmediate charge and care of the patients, have an opportunity to become acquainted with disease and its management, which could not be acquired by years of private practice. No more advantageous plan could be adopted for the improvement of the young men, than such an one as gives them the opportunity of practically applying the knowledge acquired by attendance on lectures and in systematic study, to actual practice under the supervision and direction of experienced practitioners, who, in many instances, are the professors in their colleges, and whose duty as well as interest it is to give every care and attention to the practical education of the young men who are acting as their executive officers.

Of the number of these places, an idea may be formed from the following table, which embraces all the public institutions in the city which are accessible to students either as residents or as visitors. The table gives the numbers of the consulting and attending physicians and surgeons, as well as of the residents. These former are permanent appointments, and embrace men of the highest character and standing in the profession. Owing to some recent changes, the list may not be accurate in all its items. It is believed, however, to be substantially correct :

	Consulting.	Attending.	Residents and Assistants.
New York Hospital	6	10	9
Bellevue "	4	16	21
Penitentiary " Blackwell's Island	0	—	10
Nursery " Randall's Island	—	—	3
Emigrant Refuge Hospital, Ward's Island	—	1	3
Quarantine Hospital, Staten Island	—	—	4
Brooklyn City "	2	8	2
Jew's "	3	8	1
St. Vincent's "	—	—	2
St. Luke's "	4	8	1
* Lying-in Asylum	4	—	1
Nursery and Child's Hospital	4	4	1
* Women's Hospital	4	1	1
* Lunatic Asylum	—	—	3
* Seamen's Retreat	—	—	2
City Dispensaries (5)	22	69	1
Eye and Ear Infirmaries (2)	4	6	0
* City Prison	—	1	—
Long Island College Hospital	—	6	2

* Accessible only by special permission.

Of these, it will be observed that the large general hospitals, which are the first on the list, afford the greatest number of these places, and these are more sought after by students, and are really the most valuable, as presenting them a large field for the study of general practice. The special hospitals, the infirmaries and the dispensaries, have either no residents, or but one, who is apt to be permanent in his position.

All of these places are more or less accessible to any student, who by diligence and attention to his studies. renders himself competent to fulfill their duties. In the New York Hospital, and in the Bellevue Hospital, two of the largest and most important general hospitals in the city, the selection of residents is made from all students or graduates who may apply for places, without any other requirements than good character, a full period of study, generally two years, and competency and ability, as evinced in a comparative examination of the candidates before the attending Board. All who choose to apply, who can present the proper certificates of character and time of study, are admitted to an examination, and according to the rank they take in this examination, is their chance of receiving the appointment.

In former times this was not so. The appointments were then made out of the offices of the attending physicians and surgeons, and no student who was not in the office of one of these gentlemen as a private pupil, had any chance of a hospital place, except on paying a fee of $100 or $150 for the nomination. This plan was found to work unfavorably to the interests of the institutions, by limiting the choice to a few men, not always the best students, and by excluding altogether the country students, whatever might be their merits or qualifications. The whole plan has therefore been changed, and the examination is free to all. No fee is exacted or allowed to be received, and no favoritism is shown in the nominations, so that as the arrangements are now made, the services of the best men are secured, an equal chance being given to all, whether from the city or the country, and whether they are private pupils to a hospital surgeon or to a country practitioner.

In most of the hospitals the appointments run for two years. In the New York Hospital this period is divided into three terms of eight months each. In the Bellevue Hospital the appointment is for eighteen months, which is divided into three terms. During the last term in the New York Hospital, and the last two terms in the Bellevue Hospital, the student has his board and washing free, and lives in comfortable rooms in the establishment. In the other hospitals, plans, in the main similar to those described, are adopted for securing the services of the best among the young men, to take charge as residents of their inmates.

It is beyond contradiction that no city in this country offers so many and so valuable positions to young men ; and it is confidently believed, that in no city are they so uniformly the reward of talents and capacity, and so little the gifts of favoritism or patronage.

Another noticeable feature of medical instruction in New York, is the number and value of the prizes offered as incentives to, and rewards of excellence in various departments of undergraduate study. Besides the prizes offered by the professors of each of the colleges to their own students, there are a number of very valuable ones offered for general competition at the hospitals, viz.: one by Dr. Jas. R. Wood, at the Bellevue Hospital, of $50 for the best anatomical preparation fit for preservation in the museum; and a similar one at the same institution, by Dr. Geo. T. Elliot, for the best preparation illustrating the anatomy of the female pelvis. At the New York Hospital the governors offer a prize of $50 for the best preparation illustrating any point in surgical anatomy or pathology; but the most munificent of all these prize foundations is one which has this year been established by Dr. Jacob Harsen, a wealthy and liberal alumnus of the College of Physicians and Surgeons. He offers a prize of a gold medal worth $50, and a sum of money not less than $100. for the best report of the clinical instruction given at the New York Hospital, during any four months of the year preceding the commencement in March. This prize, however, is not a general one, being open for competition to the students of the College of Physicians and Surgeons only. There are few, if any, more valuable prizes, offered to undergraduate merit in any city in the world, than this one of Dr. Harsen's, and its value becomes much enhanced by the fact of its having been made a permanent investment by the liberal founder, the interest of which is to be applied to furnishing the annual prize.

Convention for revising the Pharmacopœia of the United States.—The convention which met in Washington in May, 1850, for revising the pharmacopœia, provided for the assembling of a convention for the same purpose in 1860, as follows: The president of this convention, Prof. Geo. B. Wood, of Philadelphia, was directed on the first of May, 1859, to issue a notice inviting the several incorporated State Medical Societies, the incorporated Medical Colleges of Physicians and Surgeons, and the incorporated Colleges of Pharmacy, to elect delegates, not exceeding three, to attend a general convention to be held at Washington on the first Wednesday of May, 1860. The names of such delegates, with their residences, were directed to be transmitted to the president of the convention, for publication. These medical and pharmaceutical bodies were also requested to submit the pharmacopœia to revision, and transmit the results of their labors to the next convention.

NEW PUBLICATIONS.

Gray (Henry). Anatomy, Descriptive and Surgical, with three hundred and sixty-three engravings on wood. Philadelphia: Blanchard and Lea, 1859.

Bird (Golding). Urinary Deposits: their diagnosis, pathology, and therapeutical indications. A new American, from the fifth London edition, with eighty illustrations on wood. Philadelphia: Blanchard and Lea, 1859.

Fownes (George). A Manual of Elementary Chemistry, theoretical and practical. From the seventh revised and corrected London edition. Philadelphia: Blanchard and Lea, 1859.

Dickson (Samuel Henry). Elements of Medicine: A Compendious View of Therapeutics; or the History and Treatment of Diseases. Second edition. Philadelphia: Blanchard and Lea, 1859.

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PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*On the Suppression of Chronic Metritis during Pregnancy, and its Reappearance after Delivery, in its acute Form.* By E. NOEGGERATH, M.D.

FOR the last three or four years my attention has been directed to the very interesting question, whether pregnancy occurring in a woman affected with chronic metritis (engorgement, infarctus), would be beneficial to the patient or not. From these researches I have come to certain conclusions which are entirely contradictory to the views entertained by our best authors on uterine pathology. It is for this reason that I am induced to publish my observations on the subject.

Most authors do not mention the subject at all, while those who do are induced to attribute to pregnancy a beneficial effect. Dr. Kiwisch's words on this subject are as follows: "In many instances a conception, which may even occur in far advanced cases of engorgement, has had a favorable influence upon the course of the disease." (See "Klinische Vorträge," page 549.) Dr. Scanzoni's work "on uterine diseases," contains the following on page 146: "The most favorable chance for a perfect cure of chronic metritis may present itself by a new pregnancy and consequent puerperal state, during which the inflammatory deposits may undergo the same process of retrograde metamorphosis and alteration, which occurs in the elements of the uterine tissue itself during the time of its involution." While thus our German authors of the first standing seem to attribute a favorable effect to pregnancy upon chronic metritis, none of the English or American authors (Ashwell, West, Meigs), seems to have paid any particular attention to the subject, with the exception of Dr. Bennet, whose views I shall find occasion to mention more particularly below. Contrary to what is generally believed, one of the latest French authors, Dr. Aran, remarks on page 532 of his work "on Diseases of the Womb," "Malheureusement la grossesse laisse presque toujours les malades dans un état plus grave sous le rapport de leur affection utérine." Bequerel, who has issued the most recent work on uterine pathology, is satisfied with a verbatim translation of Dr. Bennet's views on the subject, as the author does not seem to have formed an opinion of his own.

From an analysis of our literary sources, it appears that the subject has met with very little attention by the profession, and that wherever an opinion has been pronounced it is done in a few words and void of real value, because not based on observations. But the question itself is of such practical value, as will be proven hereafter, that we are the more astonished to find that so very little has been done in the investigation of this question.

The course of chronic metritis during pregnancy is not one and the same for all cases, but varies according to circumstances. A woman suffering under this disease, may complete her full term, or she may miscarry at an early month. This latter accident, is, no doubt, the most frequent; while, on the other hand, the greatest number of abortions has its cause in the presence of a chronic metritis. If pregnancy proceeds uninterruptedly, two things may happen; the inflammatory action goes on undisturbed, or it comes to a perfect stand-still to be excited to its acute stage immediately after parturition. In the first instance, *i. e.*, where the disease is going on uninterruptedly, we have full evidence of its presence in the pregnant woman. Its characteristics are the pains in the lower part of the abdomen and back, the uninterrupted muco-purulent discharge from the vagina, and the continuance of the menstrual flux, the latter a very important symptom. Besides this, we find that the women suffering from chronic metritis during pregnancy are all great sufferers from those phenomena, called forth from the pregnant uterus by reflex action. The most violent vomiting, increasing to fatal gastritis, often repeated and alarming fainting fits, tooth-ache, and hysteric convulsions are among the number of disturbances, the surprising intensity of which is in most cases explained by the morbid condition of the uterus.

At times it happens, and mostly in those cases where the morbid action of the womb had seized upon the mucous lining, that the only spot where traces of the disease are found, is the placenta, and very naturally so, it being the only part of the mucous membrane that is left in intimate connection with the womb, the rest of this lining being changed into an almost lifeless, discarded membrane. As a result of this morbific process, we find placental apoplexy in its different stages, and genuine placentitis. Finally, it may happen, that *the morbid condition of the womb disappears during pregnancy to return with renewed energy after parturition.* To prove the truth of this thesis will be the object of the following pages.

Every practitioner of much experience will have met now and then, with women who, although enjoying seemingly perfect health during pregnancy, are afraid of every following confinement, and so are their attending physicians; I, at least, have met with several instances in my own practice. I have under my care a certain number of women, whose lives are jeopardized after every confinement by a so-called childbed fever. At first it was impossible for me to find a satisfactory explanation for this fact, till at last, by a close examination and comparison of all the circumstances connected with the history of these patients, I have come to the conclusion that all these cases of fevers repeated after every consecutive confinement, must be accounted for, and are sufficiently explained by the presence of a metritis existing in its chronic form for years, and appearing in an acute exacerbescence after every confinement. The history of one of these patients exhibits in its larger outlines the history of all of them.

Case 1.—Mrs. L—— of Hudson street, was a healthy woman up to the time of her first confinement, which happened in 1854. On that occasion she was attended by Dr. G. C. E. Weber, who was obliged to apply the forceps. The operation was unusually difficult, both from the enormous size of the child and the rigidity of the os externum. Delivery was followed by a severe metro-peritonitis, from which the woman recovered very slowly. After this time up to her next pregnancy the lady was apparently healthy, although occasional backaches, as well as irregularities in the monthly periods, and evident shows of a white discharge from the parts, seemed to indicate that some morbid process was going on in the womb. Soon after the beginning of the second gestation she felt perfectly healthy, and remained so up to the time of delivery. As soon as the first labor pains set in, I was called for, and although I was in almost immediate attendance, I was greeted on my arrival (July, 1856), by the vociferous screams of the baby itself. All that was left to do was the removal of the placenta. This happened on Friday morning, and all seemed to go on well, with the exception of a slightly accelerated and somewhat contracted pulse, till at length, on Sunday evening, the fever suddenly increased, and a regular chill ensued. Upon closer examination I was satisfied that I had to deal with an intensely acute metritis. To check the progress of the disease all was done that could be thought of, and notwithstanding, when the fifth day arrived I had given up all hopes of recovery. No lochia, no secretion of milk, very painful, and slightly swollen abdomen, repeated chills, profuse sweats—in short, not one encouraging symptom. But to our surprise, the patient finally began to improve, all the dreaded phenomena disappeared one after another, and after a six weeks' confinement to bed the patient was able to leave the city for a change of air and scene.

Still, her health remained somewhat delicate, and all the above mentioned symptoms of uterine disease made their appearance more marked than ever. But such was the strength of the patient's general constitution, that she had the aspect of a perfectly sound woman, and she never thought it worth while to be treated for these little ailings. And so she went through a third pregnancy, at first unmolested, but in the last month troubled with backache, bearing down, and all sorts of uncomfortable feelings about the abdomen and in the limbs. In February, 1858, I attended her during labor, and at this time I was able to ascertain that the womb, as far as it was in the reach of my finger, appeared to be hypertrophied and indurated, as if a plastic exudation had been deposited between the original layers of normal tissue. In harmony with this was the slow dilatation of the orificium uteri, although the pains were all that could be desired. But when the head of the fœtus had passed the os uteri, it was delivered rapidly, and parturition was effected in about twelve hours. After delivery, the pulse indicated feverish activity, and again a metritis kindled up, which, however, was of a lighter character than on the two former occasions; and after having been confined for three weeks, the patient went back to her former duties. The same uterine symptoms continued up to the present time. She became *enciente* for the fourth time in May last, and *miscarried*, as I was told, in July, without any appreciable cause, at one of our bathing resorts, where she had removed to spend the summer.

Many other cases could be given, but they are so much like the one reported, that it would be only a repetition if I should endeavor to give their details. The last instance of this kind that came under my observation is that of Mrs. P——f, of West 36th street. She was under my treatment for chronic metritis during the winter of 1857. She became pregnant in September, 1858, and seemed to be during her gestation in very good health. After her delivery in May last, she had an attack of acute metritis, so that she was not able to leave her bed until four weeks after the child was born; and even after that time, I was obliged to continue treatment for several weeks. But the most striking evidence of the truth of my former remark, that chronic metritis may disappear in its manifestations during pregnancy, to make its reappearance after delivery as acute metritis, will be found in the history of the two following cases, which are the more important because both patients died in consequence of this disease:

Case 2.—In April, 1857, I was called upon at my office by a Mrs. St——r, of Broome street, with a request to attend to a disease of her womb, from which she had suffered for more than two years in such a way that she was unable to fulfill her duties at home. She complained of an almost constant pain in her back and lower part of her abdomen, of an acrid white discharge, and of painful, scanty menstruation. These local complaints were followed by a disturbed digestion and failing strength. On examination, the womb was found considerably enlarged in all its diameters, very painful to the touch, and somewhat lower down than usual. By the speculum both lips were found increased in size and of a high color, os patent, stripped of its epithelial lining and covered with well-developed granulations, which proceeded up and downward to both lips. A thick muco-purulent secretion was seen issuing from the os in considerable quantity. After this, it was clear that I had to deal with a chronic metritis, with catarrh of the mucous membrane, in its granular stage. An active treatment was at once resorted to, which, besides internal remedies, consisted of local depletions and the application of the lunar caustic to the diseased surface as far as it could be reached; and after some time a change for the better was effected. Still, Mrs. S——r was far from being cured, when I learned that she was in the family way. This occurred in June, 1857, and I expected, from the state of her yet diseased womb, that she would not go her full term. But the contrary occurred; the more she advanced in pregnancy, the better she began to feel, and nature seemed to come to the rescue in one of its mysterious ways, where our art was insufficient to remove the evil. I lost sight of my patient until I was called upon to see her again in February, 1858. But how different did she look now from what she did when I left her. At that time she was a stout, rosy-cheeked, healthy woman, and now she was little else than a living corpse.

Delivered very easily about ten days ago, with the assistance of a physician who resided near by her home, she was soon taken with a series of violent chills and fever, which was followed by delirium and a rapid falling off in strength. These chills had continued nightly up to the time I saw her. Upon examination, the uterus was found considerably distended, its fundus situated between umbilicus and symphysis ossium pubis, very painful on being touched, and, as it seemed, immovably fixed by strong adhesions. What little of the lochia was present consisted of a few drops of a thin, fetid secretion. Near the left elbow and the right metacarpal joint were deposits of pus, and another abscess in the middle of the sacral region. There could be no doubt of the nature of the disease; it was a metritis and metro-phlebitis, with its consequences. Under these circumstances, I called Dr. J. Kammerer in, to treat the patient with me in consultation. Sulphate of quinine and morphine were the leading remedies upon which we agreed; and during the following two months the patient recovered so far that she was able to walk about and remove to other quarters. I again lost sight of her, and was told afterward that she finally died from the effects of her disease, under the care of another physician.

Case 3.—In the same month of April, 1857, when I saw Mrs. S——r for the first time, I was called to attend to Mrs. H——, of Sixth Avenue, for a disease of the womb. It would be but a repetition of the symptoms I have given of the former case should I enter upon an accurate description of this second case. Suffice it to say that she suffered from chronic metritis, but the granulations around the os were considerably larger, and finally her complaints were aggravated by a marked hysterical disposition and a very obstinate spinal irritation. In order to bring on a lively reaction in the diseased tissue, I chose the liquor Bellostii for cauterizing the diseased os and cervical canal, which, combined with an adequate internal treatment, sufficed to change the diseased organs in their functions, at least, so much, that after a six weeks' treatment the woman declared herself to be *enciente*, although she had not been so for the last four years. Still, I did not consider the cure perfected; the granulations were only partially removed, and I was of opinion that Mrs. H—— would undoubtedly have a miscarriage. As soon as I was convinced of the truth of her statement, I ceased all treatment; the patient began to feel more hearty and comfortable than she had done for years, and I therefore hoped that this pregnancy would remove the remnants of her old complaint.

In February, 1858, I was present at her confinement, which passed over as easily as could be expected in any healthy woman. The first days in childbed offered nothing out of the way, except the pulse, which had not that quiet softness so eagerly looked for in women after delivery; it was rather small and somewhat accelerated, nor was the lochial flux as easy and copious as might be desired. On the fourth day, the pulse was worse, skin dry and hot, abdomen somewhat swollen, lochia very scanty, discolored, offensive; uterus very little contracted and painful to the touch; at length came a short chilly sensation, with increasing intensity of all the bad symptoms. In short, an acute metritis was established, which demanded the most energetic treatment. And the most urgent symptoms were happily removed when, after another closer examination of the abdomen, I detected a large, painful tumor in the neighborhood of the right kidney. At that time I learned that for a few days back there had been a frequent inclination to pass water without any adequate discharge of urine. The water tested for albumen showed it in large quantities. My opinion as to the origin of this tumor was, that it was the consequence of a sub-peritoneal cellulitis surrounding the right kidney, propagated from the focus of the disease, the womb and appendages. Thus, I began to distrust the deceptive signs of a prompt recovery, and alas! too soon my worst fears were realized. Feet and face began to swell, and a thrice-repeated attack of acute œdema pulmonum brought the patient to an early grave, on the twelfth day after the birth of her child.

All these observations taken together are sufficient proof of the fact, that a chronic metritis has to go through an acute exacerbation after childbed, and in some cases to such an extent, that the patient's life is jeopardized, and it seems that the violence of the acute attack goes *pari passu* with the more or less advanced stage of disease that existed before conception took place. It seems strange to me that no author has before drawn the attention to this highly interesting phenomenon. This is partially explained by the fact that most cases of pregnancy in an inflamed uterus come to a premature termination, and if it had not happened that several of my patients whom I had treated previously for chronic metritis had been taken almost simultaneously with a more or less severe form of acute metritis in child-bed, I would perhaps, never have detected the connecting link.

The only case I have met with in the entire literature at my disposal is that communicated by Mr. H. Bennet, on page 171 of his work on inflammation of the uterus. It is headed, "*Extensive inflammatory Ulcerations of the Neck of the Uterus, existing during Pregnancy, and subdued without Abortion taking Place. Cure of the disease, but death from metro-peritonitis after a favorable confinement.*" It is very remarkable that Dr. Bennet, who was the first to establish the importance of inflammatory diseases of the womb, and who did all in his power to bring them before the public in their full value, had only one case to mention which comes under our category. This seems to me the more remarkable, because, with a comparatively limited experience, I have met with numbers of cases to justify my remarks.

What I desire to establish against the generally current opinion, is the fact that pregnancy, instead of having a beneficial effect upon the course of chronic metritis, is the very thing that imparts to this comparatively innocuous disease a most dangerous and most disastrous character. To be rightly understood, I must give some further explanations. All the foregoing remarks do only apply to the *chronic metritis* (engorgement, infarctus), exclusively of other inflammatory diseases, or simple hypertrophy of the womb. The metritis in its *chronic* stage alone will admit pregnancy to go its full term; in the *sub-acute* form it will infallibly lead to abortion. Chronic metritis is void of any active inflammatory activity, it is characterized by an eccentric hypertrophy of the womb, produced by the prolific growth of the intramuscular areolar tissue, sometimes connected, sometimes unconnected with catarrh and granular hypertrophy of the mucous lining; the womb is heavy, hardened, *mostly anæmic*, generally painful to the touch, and disturbed in its physiological functions.

At first glance it would appear contradictory to our physiological views, that pregnancy of the uterus, which produces such a true and lasting state of congestion, should not, in every instance, increase an existing inflammation, but leave it undisturbed until the involution of the uterus begins. To solve this dilemma we must bear in mind that our old notions with regard to the inflammatory process, do not stand, either in this or in many other instances, the trial of exact and unprejudiced observation. The entire doctrine of inflammation has of late materially been altered. We must bear in mind that there exists a so-called nutritive inflammation which has nothing to do, either with vascular congestion or an exudation. It consists essentially of primary changes going on in the structure that is the seat of the morbid alterations, with only secondary, if any affection of the vascular system. This is exemplified by the history of the inflammation of the cornea, the cartilages, and most of so-called parenchymatous organs. In inflammatory affections of the organs mentioned, the true nature of the disease consists of a nutritive alteration of the primitive elements of the cellular tissue. There is no exudation present, the elements themselves undergo certain changes, increasing in size and number. These few remarks will suffice for our purpose, as the tendency of the present article prevents a more minute inquiry into the nature of inflammation. It is a now generally acknowledged fact, that the chronic inflammation of the womb comes under the category of so-called nutritive or structural inflammations. But as the structural alterations during the state of gestation are seated almost exclusively in the muscular element of the womb, we can easily understand why chronic metritis, which depends upon a morbid growth of the areolar tissue of the womb, is not necessarily increased by the state of pregnancy. More difficult than the foregoing question is the one, why chronic metritis has a tendency to come to an acute exacerbation at the time of uterine involution. With regard to this point, all we can do is to point to the fact that, after delivery the intra-pelvic cellular tisue in general, is at that time, above all others, inclined to inflammatory activity, hence the frequent perimetritides, the inflammations of the lateral appendages, the cellulitides all over the pelvis, the psoitides, etc., etc. These facts taken into consideration, it is natural to think that a structure imbued already with a morbific tendency before conception, must be very apt to be called into a perverted action at this particular time—after delivery—thus giving rise to a disease generally called acute metritis.

If further observations should confirm the views proposed for the first time, in this article, with regard to chronic metritis, the disease in question arises to an importance which was not accorded to it before. But the greater the importance of a disease, the greater are the obligations of the physician who has to attend to it. Therefore, whenever we are called upon to treat a case of chronic metritis, we have first of all to interdict all sexual intercourse, until the disease is radically cured. Second, we have to continue treatment, and if it was for years, until no traces of disease are left. If we are called after conception has taken place, or if this should have occurred before the case was entirely cured, it is our duty to insist upon, or continue a treatment just as if no pregnancy existed; for ample experience has proven, that in cases of this kind even the application of leeches, or cauteries to the womb does allow gestation to go on undisturbed. But even if an abortion should occur, this accident would be less disastrous to the patient, than the acute metritis, which the patient is very likely to have after a delivery at the full term. If, finally, we are called upon to attend a lady in her confinement, of whom we know, or learn at the time, that she had symptoms of chronic metritis before conception took place, we should watch her after delivery more scrupulously than one who was perfectly healthy before pregnancy. We have to attach more importance to, and to treat more energetically the slightest deviation from the normal condition in her, than we are accustomed to do with other women.

In publishing this article I desire to draw the attention of the profession to this highly scientific and important subject, and to urge practitioners to publish their experience with regard to this matter, in order to establish the truth or falsity of the views laid down in this paper.

ART. II.—*Report of the New York Eye Infirmary for May and June*, 1859. By F. J. BUMSTEAD, M.D., Assistant Surgeon. *With Remarks upon two cases of Cataract.* By C. R. AGNEW, M.D., Surgeon to the Infirmary.

DISEASES OF THE EYE.

Injuries of the Lids	6	Sclerotitis	7
Inflammation and Abscess of the Lids	1	Iritis	14
Tumors of the Lids	11	" syphilitic	7
Nævus	1	Synechia	2
Entropion and Ectropion	7	Atresia Iridis	1
Trichiasis	2	Cataract	19
Diseases of the Lachrymal Passages	25	" traumatic	4
Tinea and Lippitudo	58	" congenital	8
Hordeolum	8	Choroiditis and Retinitis	11
Conjunctivitis simple	188	Ophthalmia interna	6
" catarrhal	12	Amaurosis	24
" gonorrhœal	1	Asthenopia	7
" purulent	4	Ptosis	2
" neonatorum	5	Blepharospasm	1
" phlyctenular	120	Strabismus	14
" granular	84	Paralysis of External Rectus	1
Pterygium	4	" Motor Oculi	1
Keratitis	31	Injuries of Globe	25
Ulcer of the Cornea	38	Microphthalmos	1
Opacity " "	31	Sunken Globe	2
Slough " "	4		770
Staphyloma	13	Diseases of the Ear	36
Foreign particles	10	Total	806
Kerato-Iritis	2		
Hypopion	2		

Operations.—For tarsal tumor, 4; for entropion, 2; on lachrymal passages, 4 (two by Bowman's method, one obliteration of lachrymal sac by nitric acid, and one by the actual cautery); for strabismus, 5; for pterygium, 1; removal of superficial opacity of the cornea, 2; excision of the globe, 11; for cataract, 19 (seventeen by keratonyxis, one by reclination, and one by extraction). Total, 48.

Lens dislocated beneath the conjunctiva.—A case of this kind was given in a former report, in the May number of this Journal, in which it was stated that the dislocated lens was extracted by Dr. Hinton, "not with the hope of restoring vision, which was irretrievably lost in consequence of the blow which produced the dislocation, but to remove the source of irritation produced by the friction of the lids against the tumor." This patient has recently returned to the Infirmary, and it is worthy of notice, that, contrary to our expectation, his vision is remarkably good. The opposite eye was destroyed some years ago, and with its fellow, the subject of the recent dislocation of the lens, he can find his way about, and with cataract glasses, is even able to read fine type. In short, his sight is as good as after a successful operation of extraction, by corneal section.

Excision of the globe.—The reader will be struck with the frequency with which this operation has been performed during the last two months, in comparison with the whole number of operations. Several of the cases, however, were sent to the Infirmary from a distance, by the attending physicians, who had exhausted all their powers in the vain attempt to permanently subdue the inflammation of the disorganized eye, which constantly recurred, and under which the opposite eye was suffering through sympathy. The following are a few of these cases:

Case 1.—Uriah Griffin, aged 40. General enlargement of eye-ball, with two staphylomata of the choroid, originating in an injury, followed by inflammation seven years ago, and much aggravated by a blow from a child's head five months ago. The excision was somewhat difficult, owing to the size of the globe. On opening the ball after removal, the vitreous was found to be replaced by a bloody fluid, and between the choroid and sclerotic were several circumscribed clots. These hemorrhagic appearances, no doubt, date back to the blow from the child's head, following which there was a rapid enlargement of the ball. Artificial eye inserted on the fifth day.

Case 2.—Patient states that the sight of one eye was impaired seven years ago, by the small pox. Three months ago, the same eye was injured by a fragment of iron, which made a small wound in the cornea, resulting in synechia and general ophthalmia. The lens soon became cataractous, and the globe atrophied. The eye is now in a state of chronic inflammation, which prevents any employment, since every attempt at labor produces an exacerbation. Entire relief followed excision.

Case 3.—Eye sunken in consequence of injury. Opposite eye repeatedly affected through sympathy. Excision. The vitreous found to be replaced by a hard and firm clot.

Case 4.—Patient a girl, aged 17. Right eye staphylomatous, ulcerated, and the seat of general inflammation. Excision. Artificial eye inserted on the fifth day.

Another case of excision is given in detail in the following remarks, by Dr. Agnew.

Remarks upon two cases of cataract.—The question as to what becomes of the crystalline lens after a successful depression, has been answered since our last report, by a case in the service of Dr. Buck, at the Infirmary, and one in my private practice.

The former was that of a man advanced in life, who had had his right lens depressed nine years previously.

Very little inflammation had followed the operation, and he enjoyed good sight for nearly nine years. A few days before his admission to the Infirmary, after stooping and again assuming the direct posture, his sight became almost entirely obstructed, by what proved to be the remains of the lens in the anterior chamber. The fellow eye was rendered useless by cataract.

The dislocated lens was about one-third the normal size, of a dark amber color and preserving a smoothness of outline, and was so placed as to obstruct the passage of light through about two-thirds of the pupil. Although it had not yet produced any inflammation, it was deemed unsafe either to restore it behind the iris or leave it in the anterior chamber, and Dr. B. accordingly recommended its removal through section of the cornea.

It may be well to consider the question, as to what becomes of the crystalline lens after depression, in the light of such a case as the above, and as illustrated by what follows.

Does it ever become entirely dissolved? I presume it never does, when its nucleus is so hard as to escape fracture under the pressure of the cataract needle. And even when the lens does break up, the fragments disappear slowly, and some of them probably always remain undissolved. I have on several occasions during the last two years enjoyed the opportunity of studying the condition of a displaced crystalline lens in eyes after extirpation. In one case, of great interest, the lens had become dislocated spontaneously, after long continued cataract, so that its upper edge was barely perceptible above the lower segment of the pupil. In this situation it had given rise to constant irritation, and been instrumental in causing loss of vision. I at first endeavored, by introducing a needle posterior to the iris, to lift the lens through the pupil, with the view of removing it from the anterior chamber by corneal section. Failing in that, however, I at once extirpated the eye, and obtained an explanation of the reason why my needle had not been able to dislodge the lens. The latter was bound down to the posterior surface of the iris and anterior portion of the choroid by a delicate interlacement of whitish bands, resembling false membrane. I was disposed to regard some of this cordage as formed by the remains of the suspensory ligament of the lens. The lens, though very opaque, was not calcified, and what remained of its anterior capsule was much thickened by a deposition of lymph. The anterior portion of the vitreous humor, much toughened, was traversed by several finely drawn, whitish filaments, and the choroid and retina both showed the lesions of acute adhesive inflammation.

In three instances, where the removal of the eye had been rendered necessary by incurable internal ophthalmia, I have found the displaced lens calcified and loosely attached to the iris and ciliary body, but in no instance reduced to more than one-third or one-fourth its normal size.

On the 26th of May, I operated by extraction upon the left eye of Mr. C., aged 79, and removed a very hard lens without accident. He had had his first symptoms of cataract in the right eye thirteen years previously, and nearly twelve years before had had the left lens so successfully depressed, that he was again enabled not only to follow the ordinary avocations of a farmer, but to read. Such use of the eye he enjoyed, with only occasional sensations of fatigue and eye-pain, for eleven years, until one day in the hay-field his eye inflamed and his sight soon went out. When I first saw him he had been blind in the eye which had been operated upon nearly a year, and in its fellow about twelve years from undisturbed cataract. The eye upon which depression had been practised was inflamed, particularly its lower aspect; its iris was of a dirty green color, and the pupil fixed, irregular and hazy. The fellow-eye showed an amber-colored cataract, a sluggish, though regular pupil, and rather more than the usual amount of senile congestion, but had a good perception of light. I was disinclined to operate upon the last-mentioned eye, for fear of deriving a fatal irritation from the other organ, but yielded to the repeated solicitations of the patient, and did extract an exceedingly hard, shrunken lens, without any other extraordinary occurrence than the escape of a milky fluid on lacerating the capsule. This fluid, derived no doubt from the softening and disintegration of the peripheral portion of the lens, was a source of embarrassment, until it had leaked out from the corneal wound and clarified the anterior chamber. The pupil being central and the wound in nice coaptation, I closed both eyes gently with isinglass plaster, and awaited an indication. On account of general debility, a moderate amount of stimulus, with beef tea and quinine, were allowed from the start. The case progressed kindly, and on the fifth day, the plasters having been removed, the corneal wound had so far healed as to hold the aqueous humor. The pupil was central, somewhat irregular and fixed. The other eye, whose association I had always dreaded, was in a very ugly state—intensely injected, painful and tender. Moderate leeching, however, warm anodyne collyria, atropine and counter-irritation, reduced the inflammation to such an extent that the other eye was much relieved. It was very interesting to observe how the amelioration of the eye operated upon kept pace with the favorable changes in the organ suffering from the secondary inflammation. This improvement in the eye operated upon has gone on, until the old gentleman is now able to read print with every facility. The fellow organ remains sightless and congested, and I have no doubt that the nucleus of the depressed lens still exists in it, furnishing the nidus of irritative inflammation whenever an additional morbid impression evokes its power. If my patient does not retain his sight, the bad associate must be extirpated.

These two cases furnish a very interesting theme. In one of them, sight remained for eleven years after depression of the cataract, and was then lost, the eye meanwhile having given occasional external evidence of internal irritation. In the other, sight was good for nine years, and then put in peril by the evolutions of an undissolved lens nucleus. I suppose that in the latter case the lens had been either mechanically involved in the depth of the vitreous humor, or else slightly held by delicate filaments similar to those alluded to in the case of extirpation. These membranous threads, like the adhesions of pleurisy, if you please, had slowly given way under the nutritive changes of the cavity of the eyeball, and allowed the incarcerated lens to escape. I am free to confess, that if the rejection of the operation of depression depended upon such evidence, it would be difficult to convince all of the comparative advantages of extraction; but fortunately for the progress of ophthalmic science, the experience against allowing the hard lens to remain in the eye is mainly made up by the disastrous consequences immediately following the operation. And we must not be disturbed in our convictions by the alleged experience of those surgeons who have operated so frequently by depression and do not remember ever to have failed in restoring a delightful amount of vision! Some day, the comparative advantages of extraction over depression will be proved by indisputable statistics, and all will join those high authorities in the old world, who characterize the attempts to cure hard cataract, by any operation having for its object the mere dislocation of the lens, as "disastrous and unscientific."

Art. III.—*Case of Vaginal Thrombus, with Remarks* by F. W. Hatch, M.D., of California.

Mrs. ——, of a sanguine, nervous temperament, had suffered severely during the whole period of gestation, with obstinate vomiting, and with frequent paroxysms of neuralgia of the face. By the rapid succession of these phenomena, her nerves, naturally excitable, had become seriously sensitive, and her general health impaired. During the latter months of gestation, the veins of the lower extremities were slightly varicosed.

I was summoned to attend her in confinement with her third child, on the morning of August 3, 1858, at 6 A.M.; learned that she had experienced slight pains during most of the night; that they appeared to be rapidly increasing in severity; but that up to this time, in the opinion of the lady, they had not been such as to require assistance. Observing that the first pain after my arrival was somewhat severely expulsive in its character, I proposed an examination, and was about taking advantage of the succeeding pain for that purpose, when the occiput of the child was felt just in the act of passing above the pubis. By this pain, in fact, the entire child was expelled. The presentation was occipito-anterior; the child healthy, but below the medium size. The absence of any pelvic obstruction or deformity on the part of the mother is conclusively shown by the ease and rapidity of the labor.

The uterus contracted well after the expulsion of the child; the placenta was found lying in the vagina, and was immediately, and with facility extracted; the vaginal canal and os uteri were ascertained to be unobstructed and in their usual condition after labor; and after the application of the ordinary "binder" upon the abdomen, the patient expressed herself as being well, and gratified at the unexpectedly easy termination of her troubles.

The usual attentions demanded by the infant were scarcely completed, however, when Mrs. —— informed me that she felt a pain in the posterior part of the vagina, referable, in her estimation, to the fact of previous constipation of the bowels. She stated that if she had had hemorrhoids of late, she would have ascribed her pain to that cause. The situation to which the suffering was referred, and the previous condition of the bowels, induced me to suppose that it must have been occasioned by the pressure of the child's head upon hardened fæcal accumulations in the rectum, and the consequent contusion of the parietes; and in this I was confirmed for the time, by the contact of the finger, introduced per vaginam, with a somewhat firm, yet sensitive ridge, extending nearly centrally along the recto-vaginal wall. The pain appearing to be rapidly on the increase, I ordered a simple enema of water for the purpose of clearing out the lower bowel. This was quickly returned, bringing away a few hardened collections, but without affording the slightest relief. A pill of opium—grs. ij.—was then introduced into the rectum and readily retained; but before even a partial dissolution of the drug could have occurred, and probably, within half an hour of the birth of the child, the complaints of pain became so urgent as to call for other means of relief. Her sensations were described as being more distressing than those she had just suffered in accouchement, confined chiefly to the posterior portion of the vagina, and to the rectum, yet causing expulsive efforts similar to those of parturition. An attempt to introduce the finger into the vagina for the purpose of a stricter examination into the cause of suffering, was interrupted by, what seemed to me, to be a protruding "bag of water," so similar to this, indeed—elastic, smooth, apparently thinly covered, its contents fluid—that but for the fact of my having just delivered the patient of a child, and the absence of any of the signs of a multiple pregnancy, it might easily have been mistaken for the unruptured membrane.

Ordered an anodyne enema in small bulk, immediately, and a full dose of McMunn's elixir of opium, to be taken in half an hour, if needed—the anodynes to be continued at stated intervals until their influence was fully experienced; cold lotions to be applied, per injection, to the tumor.

1 p.m.—The swelling had by this time increased to such an extent, as to render it impossible to introduce the finger, even anteriorly, between it and the pubis and anterior vaginal wall; is slightly sensitive to the touch; tense yet elastic; adherent along the posterior vaginal wall, extending inferiorly to within half an inch of the os externum, and upwards, beyond the reach of the finger, introduced into the rectum; is clearly visible upon separation of the labia externa, but does not involve the vulva; presents a dark, livid aspect.

A medical friend whom I requested to visit the patient with me on this occasion, conducted a careful examination and coincided with me in the diagnosis and treatment.

Complaint having been made of an urgent desire, with inability to evacuate the bladder, it was attempted to relieve her with the female catheter, but being unsuccessful in consequence of the altered position of the bladder, the curved male catheter, introduced in an almost perpendicular direction, above the pubis, was more effectual. Ordered anodynes and lotions to be continued.

Aug. 4, 6 A.M.—Patient rested well last night; pulse regular, soft, 75 per minute; skin moist; countenance expressive of no anxiety; tumor stationary, almost painless. Omit the cold applications. Urine drawn off by the male catheter.

Aug. 5, 9 A.M.—Sleep last night disturbed by neuralgic pains in the face; pulse soft, 80 per minute; skin moist; complains of no local pain, except when turning from side to side; tumor unalterd in size.

Upon consultation before this morning's visit, it was deemed advisable to make an incision into the tumor, believing that coagulation was taking place, and this would have been done, but nature has kindly effected that object by an opening, sufficiently large to admit the end of the finger upon its inferior extremity, just within the vulva; a slight hemorrhage is observed. Internally, the tumor is filled with coagula, which it was deemed inexpedient to remove. Catheter again used. Ordered frequent vaginal injections of water.

6th, 7 A.M.—Patient had a chill about 11½ o'clock last night, not followed by much febrile excitement; probably connected with the mammary secretion which is rapidly taking place, with hardness of the right breast. No inconvenience has occurred from the almost total obstruction of the lochial secretion. The bladder was evacuated this morning with the female catheter, for the first time. There is a slightly fœtid disharge from the vagina. Ordered the following: R. Liq. sodæ chlorinatæ ℥j. Aq. puræ ℥xij. M. Ft. inject. vagin. utenda interdum.

7th.—Clotted blood is discharging freely, offensive; pulse and respiration healthy; breast softer. Cont. inject. R. Ol. ricini ℥ss. Cap. statim. Chicken broth ad libitum.

9th.—Tumor discharging abundantly. Removed sundry clots from the cavity, with the finger, and washed it out freely with a weak solution of Labarraque's liq. sodæ; many half detached masses yet remain; the cavity extends beyond the reach of the finger, between the vagina and rectum.

10th.—Tumor diminishing in size; flaccid and collapsing; able, for the first time, to feel the os uteri in situ, pretty high in the pelvis. By close examination, ascertained the superior extremity of the tumor to coincide nearly with the posterior attachment of the uterus with the vagina. This fact, taken in connection with the anterior development of the tumor previously explained, may, perhaps, afford a just idea of its extent.

From this time onward, the progress of the case was favorable, with the exception of a slight attack of phlegmasia alba dolens, on the 13th, continuing five or six days.

Tonics were prescribed on the 15th; a tent of lint was introduced into the vaginal fissure, and slightly stimulant and disinfectant lotions frequently used: granulation proceeded kindly, and on the 23d, the cavity of the thrombus was almost completely filled up.

No inconvenience has since been experienced.

The case, whose progress and termination have just been detailed, is not without interest to the profession. Although hitherto frequently noticed by gentlemen in constant midwifery practice, it is not so common to general practitioners as to be devoid of importance. For this reason, and because of the solicitude which such an accident is well calculated to awaken, we have ventured to add a few facts and reflections in immediate connection with the subject, which it is believed will not prove wholly uninteresting or unprofitable. The literature upon this subject, available to the profession generally, if we except brief notices in various publications on obstetric medicine, is deficient. Dewees, Denman, Caseaux, Capuron, Churchill, and perhaps others, have alluded to cases of similar affections occurring either before, during, or after labor; and a very satisfactory account is given of it in the recent work of Professor Bedford upon the diseases of women and children. The only published case, of recent occurrence, with which we have been fortunate enough to meet, is that detailed in "St. Louis Med. and Surg. Journal" for Sept. 1857.

The most complete history of this disease to which our attention has been directed, is that by Fabre, in his "Bibliothèque du Médecin praticien." The accident, as affecting both the vagina and the vulva, is here described under all its different peculiarities and under all the circumstances in which it has hitherto been observed.

Without pursuing the interesting bibliographical account of the affection, it is clear that a large majority of the cases recorded relate to its situation upon the vulva. It is "by exception," says Fabre, that the blood spreads in the cellular tissue of the vagina without affecting the external organs. Thus, of the cases the details of which have been related by different observers, we have noted only seven in which the sanguine effusion was confined to the vagina.

The common opinion seems to be that, as in the present case, they are more frequent after delivery than at any other period, though not confined to any particular stage of gestation or parturition.

Various opinions have been expressed as to the cause of these tumors, though the manner of their formation appears to be generally admitted. In fact, it is easy to conceive that the parietes of the vessels contained within the vagina or labia, less resisting naturally than the mucous membrane covering these parts, may be so weakened by distention as to give way before the immoderate accumulation of blood which occurs at the time of parturition. If, as seems to be generally believed, they are dependent upon varices, it can be readily understood how the attenuation of the veins arising from the dilatation and obstruction to which they are subjected from the pressure of the head of the infant during gestation and before labor, and by this and the superadded force resulting from the violent expulsive efforts of the female during labor, may powerfully predispose to their formation. "A rupture of a very considerable vessel appears to be favored by the thinning of the various walls, a thinning resulting from certain varices. It is determined by the distention which the parietes of the veins can less easily sustain than the mucous membrane, or by the inordinate accumulation of blood in the veins."—Deneux. It is worthy of remark, that the tumors here spoken of, occur more frequently, according to the universal testimony of observers, in multipara, corresponding, in this respect, with what is observed of varices.

There can be little doubt, however, that many other causes operate powerfully in the production of the accident in question. There exists, certainly, no *necessary* relation between thrombus and the most well-marked varicose condition of the organs concerned. Dr. R. Lee says: "We are disposed to believe that the sudden extravasation of blood into the labia during labor, which occasionally happens, is to be attributed to the rupture of a large vein from the violent muscular effort to propel the child." Dr. Bedford says of them: "The organs immediately concerned in gestation not only become the centre of an increased afflux of fluids, but these fluids are extremely liable to obstructions in their circulation—hence arise engorgements, dilatation of the venous trunk, varicose enlargements, etc."

Where not due to external violence, Caseaux attributes them, in many cases, to an extensive distention of the veins—a distention occasioned by the impediment to the circulation arising from the pressure of the head of the fœtus at the inferior strait.

It is easy to understand the agency, as predisponents, of a rigid condition of the soft parts, of a narrow pelvis, or a want of relation between this and the volume of the infant. It is a fact, however, worthy of being noted, that many of the reported cases refer to women whose labors were, at the time, easy and rapid, unobstructed by any abnormal or unusual condition.

The more frequent occurrence of thrombus *after* delivery is well explained by Deneux. "It can happen," he says, "that the head of the fœtus, after having ruptured one of the veins of the vagina, remains applied against the opening in such manner as to effectually oppose the discharge of blood from the injured vessel."

While the compression lasts, the accident is unsuspected; it is only after the expulsion of the infant that the infiltration becomes known—the more rapidly as the size of the ruptured vessel is greater.

In a large majority of the recorded cases, the lesion is confined to the labia. Of twenty-four cases, more or less minutely described, sixteen involved the labia alone; one, the labia and immediately adjacent or lower portion of the vagina; one, the tissues between the sacrum and posterior wall of the rectum; and six, the vagina. Of the sixteen cases affecting the labia, twelve recovered, two died, and in two the result is not stated. Of the six involving the vagina, two died. In rare instances, it has been reported to have extended deeply in the pelvis, and even to the iliac fossa, and in one, the history of which is briefly given by Caseaux, the effusion is stated to have spread between the muscles and the peritoneum even to "two fingers' breadth" of the umbilicus.—Caseaux, *Des Accouchements:* 6th ed. Paris, 1858.

Under ordinary circumstances, the diagnosis of this affection would appear simple. The disease, however, is of so rare an occurrence to practitioners of medicine, as to alarm the most self-possessed, not only as to the termination, but as to the cause of a phenomenon so sudden and unexpected. The appearance of a large tumor where, a moment before, all was in an apparently healthy condition; the violent expulsive pain; and, if seen early, its rapid augmentation, added to the excitement of the patient on account of so unusual an occurrence, are all calculated to awaken the apprehension of the medical attendant. These very circumstances appear to be, however, the principal guides in detecting the nature of the difficulty. To these may be added the dark, livid aspect of the tumor, its central fluctuation; or, when the effusion simply infiltrates the cellular tissue, its "pasty" feel, (Scanzoni, *Traité des Maladies*, etc.,) and where the fact can be ascertained, the preëxistence of varices. When the tumor occupies the vagina alone, the diagnosis must be more difficult than in external or labial thrombus. The obstruction offered to the finger upon an attempt at examination; the sudden occurrence of the tumor; its ordinarily smooth surface; its connection, in some part, with the vagina; the presence of the uterus in its natural position, firm and contracted, if occurring after delivery and the extraction of the placenta; and, especially, as a differential means, the absence of the usual signs of inversio uteri, hernia, polypus, etc., concur in forming the basis of an accurate diagnosis.

No author upon the subject of this disease, whose opinion we have yet seen, has referred specially to the liability to confound it with polypus uteri. Cases are mentioned by Montgomery, Scanzoni, and others, however, of large polypi having descended into the vagina immediately after labor and the expulsion of the placenta. When, as in the case of the subject of these remarks, the sanguineous effusion is so great as to preclude the possibility of a vaginal examination, some difficulty might arise. Probably the inferior attachment of the tumor, together with a rectal examination, would remove serious doubt.

The dangers arising from these tumors are fully defined by most obstetrical authorities. They vary, of course, with the extent and position of the disease—its situation in the vagina being the most serious. Caseaux states that the prognosis is usually "grave," and adds upon the authority of Deneux, that in sixty-two cases, the mother died in twenty-two. Under any circumstances, where the effusion is at all extensive, it must be regarded as an important complication of the lying-in-state. "If death is not prompt," says Fabre, "if it does not take place by hemorrhage, it may later by gangrene, an excessive suppuration, by the absorption of purulent matter, and, perhaps, by inflammation propagated to the neighboring parts.

Upon the treatment proper to be pursued in similar cases, a diversity of opinion exists—a diversity arising, probably, from the different forms of the disease occurring to different observers, and the particular period of their occurrence. Hunter, Casaubon, Hervey de Chegoin advise an attempt to obtain resolution, and only to open as a last extremity.—Fabre, *Bibliothèque.* In this opinion, Caseaux and Churchill, under certain circumstances, concur. "Where the tumor appears first *after* the birth of the child, we ought in the first instance to apply fomentations, poultices, or cold lotions, for the purpose of relieving the pain; but on no account to open the tumor immediately, because the risk of hemorrhage is very great." "Some time should, therefore, elapse, if the pain be at all bearable, before we make an incision."—Churchill, *Dis. Fem.* Such advice, having reference to the treatment of the affection when limited to the labia, must apply with much greater force when, as in the case which forms the subject of the present article, it is located in the vagina. By waiting until coagulation of the effused fluid is effected, the danger of hemorrhage and the necessity of tamponing the canal will be greatly lessened; the indirect consequence of a wound in the vaginal coats avoided, while, with suitable care, no serious evils should result from the delay.

On the other hand, circumstances may not be always favorable to delay. The severity of the pain; the excessive distension of the affected parts, and the consequent danger of gangrene; the occurrence before delivery; are so many reasons given for an immediate incision. "Another consideration to which we ought to have regard," says Deneux, "is the state in which we find the woman. If she be pregnant or delivered, nothing will oppose the trial of resolution; but if she be undergoing the pains of labor, we should fear lest the passage of the infant should exert such a compression that the resulting contusion will be followed by gangrene."—Fabre, *Dict. Med.* After incision, or an opening by the efforts of nature, the weight of authority seems to be in favor of allowing the clotted blood to discharge gradually, and not to empty the cavity at once of its contents. Such, at least, appears to be the safer practice when the tumor is large and confined to the excavation. The period when danger from hemorrhage ceases is by no means certain. Baudelocque cites a case in which the hemorrhagic discharge from one of these tumors, the opening of which was delayed three weeks, was so great as to require the tampon. Dewees advises us to leave the clots to nature; others, to remove only the external ones.—Hervey de Chegoin. Deneux approves the removal of the more superficial portions, leaving only those which are adherent. In this Caseaux concurs.

Without pursuing this sketch of the opinions of medical authorities upon the accident under consideration, we will add only a few words, with reference more especially to the case which we have detailed above. We have quoted the opinions to which we have access, partly because the subject is but cursorily and lightly noticed by the authors on obstetric medicine whose works are ordinarily in our libraries, and for the further purpose of explaining the basis upon which, in our own mind at least, the treatment adopted in this case was sustained.

The tumor, though so large as to completely obstruct the vagina, it was deemed advisable to delay opening for several reasons.

1st. Because of the general condition of the patient. Mrs. ——, as already noticed, had been, during the whole period of gestation, the subject of severe and obstinate paroxysms of vomiting. By the frequent repetition of these attacks, for which remedial measures had only fulfilled the office of palliatives, her constitutional vigor had been much reduced, and a state of nervous exhaustion had ensued, which slight additional causes of debilitation, it was feared, might seriously aggravate. An exhausting hemorrhage was, therefore, to be avoided.

2d. Because after 12 M. of the day on which the accident occurred, the tumor did not appear to be enlarging, and though still soft at its inferior extremity, just within the vulva, it was believed that coagulation would take place favorably. Until some more pressing indication for incision occurred, or the retention of the lochiæ superadded other dangers, it was considered prudent to wait.

3d. Though the tumor did not appear to be increasing in size, and the bleeding vessel was probably plugged up by commencing coagulation, the impossibility of reaching its superior extremity with the finger, either per rectum or vaginam, rendered it entirely uncertain what extent of surface it involved, and excited a reasonable apprehension lest a hemorrhage should supervene which the forces of the patient were ill prepared to sustain. The danger of waiting until perfect coagulation had ensued was considered less than the risk of an immediate incision.

4th. In the event of hemorrhage, the presence of the tampon, by the direct irritation it would occasion, and by its indirect effect upon the discharges succeeding parturition, was thought to be a greater source of evil than that incurred by leaving the case for a few days to nature.

5th. On the day on which it was believed that an incision could be judiciously attempted, nature kindly interfered and effected an opening.

With regard to the immediate cause of the accident in the present instance, it is difficult to speak with certainty. Of the general tendency existing toward a varicose condition of the vessels, I am assured by the testimony of the patient. In this, as in her previous gestation, there was slight enlargement of the veins of the lower extremities, though not to such an extent as to require compression or other means of relief. Whether this condition extended to the vaginal vessels, there are no means of knowing, no examination of the patient having been made previous to the delivery of the child. That it occurred before the termination of labor, and while the head of the infant was still in the inferior strait, is probable, from the suddenness of its manifestation after accouchement. That it did not arise from any want of proportion between the pelvis of the mother and the infant, or from violent exertion during labor, the history of the case as detailed furnishes conclusive evidence. How far the obstinate vomiting to which the lady had been subject may, by its mechanical influence upon the pelvic vessels and by the general debilitation and relaxation of the tissues which such a condition is calculated to occasion, have concurred in engendering a predisposition to vascular dilatation, it is difficult to determine. The local congestions common to pregnancy are matters of every-day observation. The uterus being the great centre toward which all the organs converge, this organ and those connected with it become especially liable to vascular development. An aneurismal or varicose condition of the vessels is the frequent consequence. Though these phenomena may be purely local, they are not always nor even generally such. The organic and functional modifications which the state of pregnancy induces play an important part. The condition of pregnancy itself, it is now pretty well determined, instead of being one of true plethora, is marked by changes in the composition of the blood not unlike those of chlorosis, or chlora-anæmia. The amount of fluid and the activity of its circulation are increased, but the qualities it possesses are those of impoverishment, a diminution of its globules, a large excess of serum. Whether, as Hoffman ingeniously argued, this hydro-polyæmic condition is due to the sympathetic influence of the uterus upon the stomach, giving rise to dyspeptic symptoms; these, in their turn, to a defect of nutrition, and this to an insufficiency of the materials necessary for the development of the ovum, and, at the same time, the maintenance of a normal standard in the mother; or whether it is but the mysterious result of the sur-excitation of the nervous system, as some have suggested—a want of equilibrium between this and the blood—the consequences are the same. "The superabundance of impoverished blood occasions local congestions." . . . . "These uterine congestions, considered with reason in some cases as due to general plethora, I have more frequently observed in feeble and anæmic women." —Caseaux, 6th ed. When to this view of the influence of pregnancy upon the economy—to this hydræmic condition, the result of pregnancy—this defective assimilation and nutrition, and the train of consequences, we add the directly debilitating, exhausting and relaxing influence of the functional condition to which we have referred, and of which Mrs. —— was so pertinaciously the subject—the forced abstinence from sufficient food, the waste without adequate supply, and the mechanical effects of the constant efforts at vomiting—have we not a foundation upon which to erect at least a rational theory of the causes predisposing, in this particular case, to the occurrence of the accident in question?

Did time and the proposed limits of this paper permit, much might be said in favor of the hypothesis of an inflammatory, or, at least, congestive origin of the disease; a venous inflammation resulting in hypertrophy or varix—at least, as a remote cause. The frequent insufficiency of the mechanical theory of the difficulty; the absence of obstructive causes sufficient to account for it; the perfect correlation existing between the dimensions of the fœtus and the pelvis of the woman; its occasional occurrence under circumstances which repel the idea of mechanical violence, and its uncertainty even as a consequence of extreme varicose conditions of the vessels, seem at times to compel an appeal in aid of a solution to the intricate yet beautiful inductions of vital philosophy.*

Another point of some interest in connection with the case immediately under consideration, is the occurrence, on the tenth day, of well-marked indications of phlegmasia alba dolens, attended with acute tenderness along the course of the saphena vein. It serves to throw additional light upon the pathology of that affection, and apparently confirms the opinions now generally entertained of its inflammatory character. The propagation of inflammation from the pelvic veins involved in the dilatation to the vessels of the lower extremity can be easily understood.

Sacramento, Cal., *June* 17, 1859.

Art. IV.—*On Auscultation of the Voice.* By J. Herzka, M.D.

(*Continued from p.* 59.)

The semiotic significance of bronchophony is the same in general as that of bronchial respiration. The latter tells that the part of the lungs over which it is heard, or the part next to it, does not breathe, or does so but sluggishly (see this Journal, *a. c.* March number, "On the Respiratory Sounds"); and the former, that is bronchophony, means that the part of the lung over which it is heard, or the part next to it, does not speak; *i. e.*, it does not participate in the vocal expiration.

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* Since summing up the notes of the present case, a striking and unusually aggravated example of varicose enlargements, affecting the lower extremities, and during the three latter months of gestation involving in tortuous knots of enormous dilatations the veins of the vulva and labia interna, and extending up to the superficial veins of the vagina, rendering locomotion, or even the erect or sitting posture, painful, and exciting serious apprehension as to the ultimate result, has occurred to me, in which the process of parturition, notwithstanding, terminated speedily and happily. The venous dilatations in this case were so large and distressing to the lady as seriously to suggest the propriety of a premature delivery at the seventh month; and the question here incidentally arises, how far such an operation would, in extreme cases, be justifiable, not only with a view to immediate relief, but, admitting the active causation of varices in the production of thrombi, as a provisionary measure. Would the reasonable anticipation of danger from such a cause justify a procedure which ought to be considered the last resort of the physician?

Perhaps it might be said, with some show of reason, that the result of this case is itself the best negation to the query propounded.

At the first glance, this might lead to the conclusion that bronchophony and bronchial respiration must be coexisting, so that where the one is heard, the other must be met with too. But experience is at variance with such conclusion, and a close examination will show that the reality is still in perfect harmony with theory, and that the error rests solely with the just-mentioned conclusion. The facts in the case are these: Bronchophony is a certain modification of the vocal sound; this sound is formed nowhere in the tissue of the lungs or in the bronchial tubes, but its birthplace is the glottis. Wherever else this vocal sound is heard over the thorax, it has to be propagated there from the larynx, and if the current of air against which it has to travel takes from its intensity, it is a matter of course, that the longer the way is, where it has to contend against the current, the greater will be the loss of its intensity. Suppose, then, a small portion of the inferior lobe of the lung, through a pathological condition of its tissue, to be excluded from the vocal expiratory act, so that the air in its bronchi remains stagnant, and that no air-current exists in this portion of the lungs during vocal expiration, must there be heard bronchophony over the part of the thorax corresponding with that portion? Certainly not; because the voice had to be conducted against the current all the distance from the glottis down to the mouth of the small bronchial tube, which forms the main channel for that portion of the lungs in which the air is stagnant, and where the voice has to suffer no further loss of intensity, but where it arrives already sufficiently thinned as not to be called any more bronchophony. It is not so with the bronchial respiration. This is a sound which is not only incited at the glottis, but at each bronchial embouchure far down to tubes of considerable minuteness of diameter. Wherever, therefore, there is even a small portion of the lung which does not at all, or only sluggishly, partake in the respiratory excursion, the bronchial tube of such portion will receive the sound from the bronchial tube of the adjoining portion of the lungs at the point where both tubes open in the bronchial tube of the next larger diameter, and from there the respiratory sound, which is bronchial in its original character, will be conveyed with very little loss of intensity and original character, to the portion of the lungs which is at rest, and thence to the ear of the auscultator. We can thus hear bronchial respiration over a part of the thorax, and at the same time not hear there bronchophony.

On the other hand, if through an abnormal condition of the respiratory organs bronchophony is heard over some portion of the thorax, there is not necessarily to be heard at the same place bronchial respiration; that is, the most perfect bronchial respiration *ch* (German pronunciation), because that particular metal of the respiratory sound is entirely independent of the condition of that portion of the lung over which it is heard: it is entirely independent of the condition of the bronchial tube passing through such portion of the lung; it is independent of the facilities for the conveyance of the sound through such bronchial tube by the absence of an air-current; but it is caused solely—as I believe to have proved by experiments, (see this Journal, March number, *a. c.* "On the Respiratory Sounds")—by the flattened bronchial embouchure where the sound originated, and which embouchure is transformed from its circular shape into a longitudinal slit. But wherever, in a diseased state of the respiratory organs, we meet with bronchophony, we can be sure to meet also with that sort of bronchial respiration which Skoda has called "undefined respiration" (unbestimmtes Athmen.)

If, on auscultation, bronchophony is heard over that portion of the lung which, through pathological changes, is excluded from its normal participation in the act of vocal expiration; or in other words, if bronchophony is observed over that portion of the lung which does not speak, it follows forcibly that the bronchophony will be the stronger, first, the larger that portion of the lungs; second, the nearer it is to the respective bronchus and to the trachea. For if the idle portion of the lung is small, all the surrounding parts will, nothing preventing, partake more or less in the vocal expiration; in all these parts, then, there will be an air-current directed toward the larynx, and adverse to the propagation of the voice from the larynx to the inactive part of the lungs; although, once it has reached that portion, the remaining part of the voice will there meet no further obstacle, and be hence freed from the weakening influence of the current. The same consideration applies to an idle part of the lungs far remote from the trachea. Suppose the lowest part of the lungs be compressed or infiltrated, the voice has still to travel against the current from the larynx down to that portion of the lungs, and on arriving there it has already lost a great deal of its strength by the adverse current, while that compressed or infiltrated part of tissue has no strengthening power for the voice, it cannot make the voice stronger than it receives it.

The reverse must be the case where a whole lobe is excluded from the vocal expiratory compression, or where a small portion of the lung, but in proximity to the trachea, is, through a pathological change, kept idle at vocal expiration.

When it is further considered that the quantity of pleuritic effusion which is required for the complete compression of a large portion of the lung, say a whole lobe, is so great that the sound, vocal or respiratory, which has to pass through such effusion from the parenchyma of the lungs to the ear of the auscultator, must lose on this passage from its strength and distinctness, of which it was possessed at its leaving the parenchyma, and that, therefore, under such circumstances, a very strong bronchophony is not to be expected, and is in reality rarely met with, it will be acknowledged that the bronchophony, and a close attention to its different degrees, are valuable diagnostic aids.

Let us suppose, for instance, that on making percussion on the thorax, we discover a rather limited spot where the sound is dull. We will say there is corresponding with this spot a part of the lungs which does not contain air. But is it through compression or through infiltration that it is made airless? We auscult and hear a strong bronchophony, and we declare at once that the portion of the lung which is airless must stretch deep in the interior of the lobe, and that consequently the cause of this solidification is not compression alone through a thoraic effusion, but infiltration.

Or suppose the dullness of the sound on percussion extends over a large portion of the thorax; on auscultation we discover strong bronchophony. Have we there to deal with a pleuritic exudation, and consequent compression of the lung, alone? Can pleurisy, hydrothorax, pyothorax, or hæmathorax alone be the cause of the auscultatory result? Probably not; because the mass of liquid intervening between the parenchyma and the thoracic wall would likely be too great to admit the perception of strong bronchophony. And from this circumstance, we will lean more toward diagnosticating an infiltration, pneumonic or otherwise.

It is difficult to draw the division line between strong and weak bronchophony, as the one must naturally pass over by degrees into the other. Still, Skoda has endeavored to mark the strong bronchophony by a particular feature, and to characterize the weak bronchophony by the want of the same. He says, page 83 (op. cit.), "I distinguish, 1st. The voice with simultaneous concussion (Erschuetterung) of the ear—the voice which passes entire through the stethoscope—strong bronchophony, which may be clear or dull. 2d. The voice without any, or with very little, noticeable concussion of the ear—the voice which passes but partly through the stethoscope—weak bronchophony."

While bronchophony is marked with a certain degree of strength and clearness of the voice, there is still another requisite which enters in its composition. Bronchophony means a certain metal of the voice combined with a certain intensity. By this metal the voice partakes more or less of the character of the voice sent forth through a speaking tube. Why this is so, I will presently endeavor to explain.

We distinguish in a sound four qualities, which, from being dependent upon certain numerical proportions and dimensions, I venture to call the mathematical features of a sound. These are, first, the highest key or note; second, the intensity, or strength; third, the duration; fourth, the fullness or volume. In regard to the key, we distinguish high and deep sounds; in regard to intensity, we distinguish forte and piano; in regard to duration, we distinguish long and short sounds, and in regard to volume, we distinguish the full and the hollow empty sounds.

That the key of a sound corresponds, and that its height is in direct proportion with the number of undulations made in a second, is long since an established and undisputed fact in acoustics. It is also beyond doubt that the intensity of a sound depends upon the amplitude, *i. e.*, the length of each excursion, or undulation. Not so with the duration and the volume of sound. Acousticians ex-professo, have, as yet, not given them due attention. What they are, if they are anything, and to what principle they can be reduced, has been handed over to doctors of medicine to pronounce upon; and as doctors will disagree, we cannot wonder at meeting with more than one opinion on these points.

I will not allow myself to review in this place the whole controversy in regard to them. I will, nevertheless, state, that I must consider Skoda's arguments against Mazonn and others, for the distinction between duration and volume, *i. e.*, between long and short sounds on one side, and full and hollow sounds on the other, and for the separation of both, duration and volume, from the intensity and the key of a sound, as conclusive. The duration of a sound corresponds with a cipher, which represents the degree of elasticity of the sounding body (Wintrich), and the volume or fullness of a sound depends on the mass of sounding substance (Skoda). Or to come nearer to exact acoustic terminology, I would say: the fullness or volume of a sound depends on the circumference, or transverse diameter of the sound-wave.

Different from these quantitative, or mathematical features of the sound, its key, intensity, duration, and volume, is another, which is accepted by acousticians, musicians and physicians, and which may be styled the qualitative distinction of the sound. It is what generally goes by the name of the metal of a sound, its timbre.

By the metal of the sound we distinguish one musical instrument from another. That it is not intimately connected with the material, may be judged from the circumstance, that when the chord of a guitar is adjusted to a violin, it does not exhibit any more the metal of the guitar, but acquires the metal of the violin, and *vice versâ*. Or that, when the chords of a guitar are made to resound by the stroke of the bow in place of the use of the fingers, they simulate the metal of the violin, and *vice versâ* with the chords of a violin when the fingers take the place of the bow. So can, in general, the same piece of wood or brass, be worked into different instruments.

Nor can the metal of a sound be considered identical with its key, intensity, duration, or volume; for all these mathematical peculiarities we can at will alter without affecting thereby the metal. By shortening the chord of a violin, we raise its key; by stretching or relaxing it beyond a certain measure, we lessen the duration of the sound (Wintrich); the intensity of the sound is perfectly under our control; to increase the volume of the sound we need but increase the number of violins. But with all these changes the metal remains the same, it is always a violin we hear, be the note high or deep, be it played fortissimo or pianissimo, be it a solo of a street performer on his fiddle, or a unisono of a dozen Paganini's, all handling Cremonese instruments, as famous for the fullness of their sound as that virtuoso for his mastery. We must, therefore, come to the conclusion, that the difference of metal results solely from the contrivance.

How the contrivance could influence the metal, will appear from the following: The sound of every musical instrument is a combination of sounds. One of them is the ruling or dominant, the principal, or the real musical sound; the other, or others, are adventitious sounds. So, for instance, in the sound of a violin, does the vibration of a chord produce the principal sound, while the sound called forth by the friction between the bow and the chord constitutes an adventitious sound.

(It would lead me too far from my purpose to determine, whether and how the box and the air contained within also furnish adventitious sounds.) The same in a guitar. The vibration of the chord originates the principal sound, and the friction between the fingers and the chord gives birth to an adventitious sound. The same in the piano, vibration of chord —principal sound; rap of the fingers on the key—one adventitious sound; knock of the hammer against the chords—another adventitious sound; and the gentle clack between the key and its frame a third adventitious sound.

The so-called wind instruments do not make an exception in that respect. In the flute, for instance, the vibration of the air produced by the shock between the respiratory air-current of the musician and the air in the flute gives existence to the principal sound, while that very expiratory air-current carries already with it the rather strong, expiratory, blowing sound, which joins the principal sound as an adventitious sound.

If in other wind instruments the lungs and the mouth of the musician are replaced by a pair of bellows, that does not make a difference in the principle, as the air forced out of the bellows carries already a blowing sound on its wings, before it helps to produce the principal sound which is musical.

The adventitious sound differs always from the principal or musical sound in intensity, which is so much greater in the latter than in the former, but even in the rest of the mathematical peculiarities of a sound, *i. e.*, in note, duration and volume, will the two sounds hardly ever be on an equality.

This combination precisely of sounds which differ from each other in the one or more, or all the mathematical properties of a sound, of which further one plays the part of the principal sound, and drowns, as may be said, all the others designated by me as adventitious sounds, but all of which together, make up the total of a sound of a musical instrument—this combination forms the metal or the quale of the sound of that instrument.

That this view of the metal of sounds is correct and not a mere arbitrary guess, I am prepared to demonstrate by facts. First, if we alter the contrivance for the production of musical sounds, by transferring certain arrangements calculated for one sort of instruments to another, we deface at the same time the original metal of such instrument. For instance, if, instead of striking the violin with a bow, we use the fingers, as we do on the guitar, or if we strike the chords of the latter instrument with the bow of a violin, we adulterate thereby the metal of both instruments. Second, if we stand too close up to the performer on certain instruments, so that we can also distinctly hear the adventitious sounds, the metal of those instruments will proportionately lose its purity, because the ear receives two or more sounds separately, of which none is equal to the combination of all, where one is predominant, but is still tempered by the others, although we are not conscious of it, through the organ of hearing . Let, for instance, any one stand close up to a person that plays on the flute or blows the horn, he will distinctly hear the expiratory, blowing sound out of the mouth of the performer, and will, at the same time, discover that this by-sound forms an alloy to the pure metal of the respective instruments. Third, if the ear is placed at such a distance from the musical sound, that the adventitious sound or sounds cannot reach it any more, then again will the peculiar metal disappear more or less, because the principal sound alone, which is so much the superior in intensity of all the adventitious sounds, will meet the ear divested of that originality which those very adventitious sounds imperceptibly imparted to it. The ear will miss the tempering effect of those by-sounds, although it was never conscious of their existence, even when under the influence of their combination with the principal sound. For that reason, we cannot with accuracy distinguish one musical instrument from another, at a certain distance, although we can still hear the principal sound, and perhaps one or the other of the adventitious sounds loud enough. Fourth, there are some very few instances where sounds are produced by such means, which preclude the existence of adventitious sounds, as at the detonation in a wide space of the open air of explosive substances, which is not contained in a vessel so that neither resonance on the part of the surrounding air, nor the friction between the explosive air and the rim of the vessel, nor the cracking of the vessel itself can give origin to by-sounds; or at the discharge of electricity, which is accompanied by a sound; and perhaps there are a few other modes of a similar nature. These sounds we can readily distinguish from others which are characterized by one or another kind of adventitious admixture; but we cannot distinguish them from each other by their metal, which is and must be the same in all of them. The roaring cannon has the same character with the rolling thunder, the difference between them for the ear is in the tune. It is one metal in two coins.

Speaking, singing, laughing, crying, etc., are manifestations of the voice. Of all these, it is the voice of speech alone which has all along been and is still under consideration, in the present communication.

The voice is a sound of a peculiar acoustic apparatus, and as such, it must be subject to all the laws and principles governing sounds and musical contrivances.

As a sound it must possess the heretofore mentioned mathematical features, key, intensity, duration, and volume; it must also be characterized by its qualitative distinction; it must have a metal; and as the effect of an acoustic contrivance it will be a combination of more than one sound, of which one is the principal and the other or others are adventitious. The metal of the voice must each time depend upon the number of the different components, and on the mathematical features of each of the adventitious sounds as they are grouped around the principal sound.

Since the experiments of Joh. Muller, among German physiologists *facile princeps*, the contrivance must be classed among the wind instruments which are provided at the mouthpiece with a ligula (zungenpfeifen Instrumente). The modus operandi is this: the air is forced out of the lungs, so that it forms a current. This current effects a shock at the narrow opening of the glottis; the air is set in oscillatory motion, which originates a sound. This sound is the dominant or principal sound, with which is associated at least one adventitious sound. The adventitious sound is the expiratory sound, which existed already, when the air-current passed the bifurcation, wherefrom it was carried on the wings of that current to the glottis, and beyond it. That also the vibration of the chordæ vocales at vocal expiration gives birth to an adventitious sound, is most likely, although not beyond doubt. But that such vibrations of the chordæ vocales take place, has been fully ascertained in the experiments of Joh. Muller, which have been tested of late by Wintrich. But since Manuel Garcia's laryngeal speculum has been brought in use, the vibrations of the chordæ vocales, in vocal as well as in respiratory expiration, have been made the subject of ocular demonstration.

Of all the sounds represented by the letters of the English alphabet, none comes out of the larynx in its perfection. Some of them are mere streperous sounds, which are produced at one or the other section of the cavity of the mouth, as at the isthmus faucium, or between the teeth or lips.

In the formation of these, the larynx does not participate any further than to furnish the necessary air. Some again—the musical sounds of the vowels and of the consonants L, M, N, R,—are begun, if I may say, at the larynx, to be completed in the cavity of the mouth. The larynx furnishes the fundamental sound, which is shaped in the cavity this side of the larynx into different letter sounds.

This note-sound of the larynx, as stated before, is a combination of at least two sounds: the sound of the glottis—principal sound; and the sound conveyed there by the air-current from the bifurcation—adventitious sound.

The formation of the streperous sounds of most of the consonants, and the shaping of the note-sound of the larynx into the sounds of vowels and of the consonants L, M, N, R, through different positions of the organs of the oral cavity, constitute the *articulation* of the voice.

Experiment.—First. I apply the stethoscope to the region of the larynx on a person, who at the same time pronounces the different vowels with a loud voice, and I find that I cannot distinguish any of them through the stethoscope, but that they all sound something like a sound between *a a* and *o a; i. e.*, I hear the note sound of the glottis.

Second. I introduce the funnel-shaped end of a stethoscope in the mouth of a person so far as the isthmus faucium. The different vowels are again uttered by that person in a loud voice. The person thinks to pronounce them distinctly; but the auscultator or the bystanding listener cannot notice the least mark of a vowel. The above-described fundamental sound is all that passes through the stethoscope.

From this experiment, I conclude that the note-sound of the glottis does not undergo any modification in the fauces, and that consequently the modification of this sound must be looked for this side of the fauces, or at the isthmus faucium.

Third. I bring my upper and lower jaws close together, or I let another person do so. The lips are kept separate and prevented from moving. The vowels are loudly uttered and as distinctly heard.

From this experiment, I conclude that neither the lips, nor the space between the lips and the teeth, contribute to the formation of the sounds of the vowels, and that the same must take place in the *cavum oris proprium.*

Fourth. I open the mouth wide; I make the lips and the jaws steady in this separate condition; the vowels are pronounced and distinctly heard. In this experiment, the antero-posterior diameter of the bucco-pharyngeal cavity can be lengthened or shortened, according as the lips are pushed forward in front of the teeth, or are kept in close contact with them. But this change in the diameter does not affect the perfect distinction of the uttered vowels.

From this experiment, and from a comparison of its result with the result of the former, I draw the conclusion that the transformation of the fundamental sounds into those of the several vowels, is independent of the length of the longest diameter of the cavity of the mouth, and independent also of the width of its opening, which may be as wide as the separation of the lips and of the jaws can make it, or consist merely of the very narrow interdental fissures. (Exp. 3.)

Fifth. I open the mouth as wide as I can; I then utter the note-sound of the glottis, and with a small pane of glass, a piece of pasteboard, or some other convenient article, which I pass close before the opening of the mouth, I make the same by degrees narrower without affecting hereby the fundamental sound. No vowel is formed by this proceeding.

From this experiment, I again conclude that the transformation of the note-sound of the glottis in the sounds of vowels, is not effected by a change of width in the buccal aperture.

Sixth. Whether in all these, and in the following experiments, the nostrils are both open, or only one, or neither, does not materially interfere with the formation of the sounds of vowels.

Seventh. If the lips are tightly closed, the formation of vowels is entirely prevented, whatever the shape and capacity of the buccal cavity may be. From this experiment I conclude that the passage of the expiratory air through and out of the cavity of the mouth is most essential to the formation of vowels, were it only through such narrow outlets as the interdental fissures offer.

Eighth. If I keep the tongue steady at the bottom of the mouth, all efforts at formation of vowels will fail. The fundamental sound, and nothing else, is heard. From this experiment, I naturally conclude that the free elevation of the tongue toward the palate, is necessary for the formation of vowels.

Ninth. If I open the mouth and utter the different vowels, I can observe, with the aid of a looking-glass, that the isthmus faucium alters its shape and width at the pronunciation of the different vowels, and that it is the narrowest at the vowel E. This alteration in the shape and width of the isthmus is effected principally by the raising of the tongue toward the palate. From this experiment, I conclude that the formation of each vowel corresponds with a certain width and shape of the opening between the fauces and the cavum oris proprium. And to the circumstance, that at the sound E, the tongue reaches its greatest elevation, I attribute the difficulty which I always find at the utterance of this one sound (in Exp. 5) where the lower jaw is kept down, and consequently the tongue is prevented from rising freely.

Tenth. If instead of uttering the fundamental sound of the glottis, I simply make an expiration, altering at the same time the relative position of the tongue, I can plainly distinguish that the expiratory sound changes from Hou to Ho, Haa, Ha, Hi, He, according to the narrowness and shape of the opening between the back of the tongue and the palate.

The summary of my conclusions, therefore, is this: that the sounds of the vowels are combinations of the fundamental sound with an adventitious sound; that the adventitious sound is an expiratory sound, which is produced by the passage of the expiratory current through the more or less narrow opening between the tongue and the palate; that the expiratory sound is higher or lower according as the opening is narrower or wider, the narrowest corresponding with the highest sound, *He*, and the widest with the deepest sound, *Hou;* that the combination of the fundamental sound of the glottis with these adventitious sounds, which, as stated, differ in one of their mathematical qualities, the key, must exhibit a corresponding change in the metal, and that, therefore, the whole difference between the sounds of the different vowels, is a difference of metal, each vowel being a combination of the fundamental sound with a different adventitious sound.

The formation of the sounds for the consonants L, M, N, R, rests entirely on the same principle. Each of these sounds is a combination of the note-sound of the glottis with an adventitious sound produced at one or another spot within the cavity of the mouth by the expiratory air-current. So is the sound of M a combination of the note-sound of the glottis with an adventitious sound produced through the shock which the expiratory air-current experiences at the sudden closure of the lips.

The correctness of this view I have tested by the following experiment: I strike a tuning fork to make it sound; I place it on a table to increase the intensity of such sound, and then I touch it with the pulpous part of the finger. At the very instant that the finger meets the fork its sound assumes the character of the sound M, and vanishes.

The sound of N seems to be the result of a combination between the note-sound of the glottis and an adventitious sound produced by the passage of the expiratory air-current between the interdental fissures and the edges of the tongue pressed against them in front.

The sound of L is a combination of the note-sound of the glottis and an adventitious sound produced by the passage of the expiratory air-current through the narrow space left between the palate and the front part of the tongue, which is rolled up and somewhat backward. And at last, the sound of R is a combination of the note-sound of the glottis and an adventitious sound produced by the passage of the expiratory air-current through the space between the root of the tongue and the soft palate, which is kept in a position apt to make it oscillate at the passage of the air-current.

I need hardly mention that all that has been here and will further be said about the vowels, holds good also for their compounds, the diphthongs, *mutatis mutandis.*

QUARANTINE, STATEN ISLAND, *July 1st*, 1859.

(To be concluded in our next.)

Art. IV.—*Transactions of the Medical Society of the County of Kings.* Prepared by a Committee of Publication.

January, 1859.—*Congestive Intermittent.*—Dr. Hutchison gave an account of a case of malignant or congestive intermittent fever, occurring in a negro man about 35 years of age, employed as a steward on a California steamer. Soon after his arrival at this port he had an attack of bilious remittent fever, from which he recovered; and at 3 a.m., Nov. 27th, he had a slight chill, followed by fever, stupor, a very frequent and feeble pulse, and occasional violent spasms of the muscles of the right arm. On the following day, 28th, he was much better. On the 29th, Dr. H. was requested to see him, by his physician, Dr. Andrews of East New York, and learned that he had a slight chill about 3 a.m., followed by a fever; he was now (4 p.m.) profoundly stupid; pricking the surface with a pin, pulling his hair, etc., did not develop the slightest sensibility; pupils contracted and insensible to light; muscles of right arm in a state of tonic spasm, and occasionally there was a violent general convulsion (epileptifom); breathing frequent and noisy; pulse very feeble and could not be counted. Ice was applied to the head and 5 grs. carb. amon. ordered every hour, and should he live through the paroxysm, 40 grs. quinine to be taken during the next interval.

Dr. H. had heard to-day (Dec. 10th,) that the quinine (40 grs.) had arrested the disease, and that the patient was now convalescent. He considered the case interesting from its rarity in this latitude; he had seen such cases in the southern portions of the United States prove fatal during the first paroxysm, and it is said that patients never live through the third.

Operation for the radical cure of congenital hernia.—Dr. Whitehead related the history of a case of congenital inguinal hernia occurring in a boy two and a half years of age. The hernial tumor was about the size of a hen's egg, and extended into the right scrotum; the index finger could be readily passed through the external abdominal ring. On the 20th of Dec., '58, Dr. Hutchison performed Riggs' operation for the radical cure of hernia; the seton was dipped in tinct. iodine before being drawn into the inguinal canal, where it was permitted to remain for forty-eight hours. Moderate pressure was kept up over the inguinal canal by a sponge, retained in its position by a T bandage, for two weeks, and child kept as quiet as possible. It is now four weeks since the operation, and although the child cries a great deal, the hernia has not returned. This is the first case in which Riggs' operation has been performed for the cure of *congenital* hernia in a child.

Dr. Hutchison remarked that in performing the operation on children, a smaller instrument should be used than for adults; he found some difficulty in passing the instrument into the canal by the side of the index finger, in the case related by Dr. Whitehead. He had operated successfully on the adult, and had several times operated on the subject, and by subsequent dissection found that the parts involved in the operation were the integuments, fibres of the cremaster muscle, inter-columnar fascia, and the tendon of the external oblique muscle. In congenital hernia, and in all cases of long standing, the peritoneal covering is also probably perforated.*

Croup.—The subject proposed for consideration this evening was *Croup.* Dr. Crane, by appointment, read a paper in which he considered true croup, and its allied diseases, in their anatomical and pathological relations; entered somewhat largely into the subject of dyscrasia in general, and of croupous dyscrasia especially, and quoted from various authorities, but more largely from Rokitansky, on this latter point.

The conclusions at which Dr. Crane arrived, were, 1st. That laryngismus is simple spasm of the laryngeal muscles, resulting from local or reflected irritation.

2d. That catarrhal laryngo-trachitis may give rise to the same symptoms as true croup, and may prove fatal from sudden œdema of the glottis and of the sub-mucous tissues within the larynx, or from inflammation associated with *prolonged spasms.*

3d. That simple catarrhal laryngo-trachitis *never* results in the formation of *false membrane.*

4th. That the character of false membranes are sui generis, and widely different.

5th. That they vary in their character according to the dyscrasia, or diseased condition of the blood.

6th. That the dyscrasia of the blood differs according to the quantitative or qualitative variations of diseased from normal fibrin.

7th. The character of the deposits, in different cases, corresponds closely with those of the coagula formed in the heart and pulmonary vessels.

8th. Croupous dyscrasia, in its localization, makes special selection of mucous membranes, particularly of those of the air-passages.

9th. Under the influence of this dyscrasia, exudation of mucous fibrin may be developed in other tissues; consequently it is not dependent upon mere inflammation.

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* The case was examined to-day, Aug. 1, by Dr. Hutchison, who found that the tumor had reappeared. The operation must, therefore, be reported as unsuccessful.

10th. Croupous exudation is inorganizable, and its tendency is to early liquefaction.

From these premises the conclusion was drawn that croup is an inflammatory process upon the mucous membrane of the larynx, trachea, and bronchi; resulting under the presidency of a special dyscrasia in the exudation of an inorganizable false membrane upon their surfaces.

Dr. Chapman remarked, that the casts sometimes thrown off in dysmenorrhœa, in diarrhœa tubulosa, in diphtheria of the mouth and fauces, and the false membrane of croup, were analogous, if not identical membranes; and secondly, that these exudations may and do occur *without inflammation*, although in most cases they were attended by an *inflammatory* condition of the mucous membrane. Thirdly, that these exudations were composed of the liquor sanguinis, containing *fibrin* and *albumen* in varying proportions. The firmer membranes had *fibrin* in excess; the softer—more pultaceous—had more albumen.

In support of these opinions, Dr. Chapman cited Churchill's statement, that the false membrane which lines the cavity of the uterus, in a certain form of dysmenorrhœa, and which is thrown off at the menstrual period, "is composed of plastic lymph, such as is secreted by the mucous membrane in croup." He also quoted Ferguson to this effect, "that the casts in dysmenorrhœa are composed of coagulable lymph;" and the assertion of Dunglinson that "the fibrinous casts in diarrhœa tubulosa are the same as those of diphtherite, and that there are rarely indications of inflammation of the intestines;" and Dr. Symonds, who says, that in fibrinous diarrhœa there is "a secretion of coagulable lymph which bears a close resemblance to the false membrane of croup." In view of these facts and authorities, Dr. Chapman reiterated the opinion that these exudations on mucous membranes are identical, and composed of *fibrin* and albumen in varying proportions, and that they *could* occur without inflammation, although inflammation was *generally* present. Dr. Chapman also expressed his opinion that diphtheria is not a *disease*, but that it is a concomitant, attendant, or accident, in a variety of diseases or pathological conditions, entirely diverse.

Dr. C. then referred to his treatment of *croup;* which was antimony and ipecac., at first in emetic, and afterward in nauseating doses, alone or combined with calomel, according to circumstances. He was accustomed also to apply the nitrate of silver to the larynx and trachea, after the failure of medication, and had succeeded in several instances, even after the formation of false membranes.* He used from 40 to 60 grains, of the nitrate to the ounce of water.

FEBRUARY.—At the regular monthly meeting, Feb. 15th, 1859, the subject of Croup was resumed. Dr. Bell opened the discussion, remarking as follows:

It seems to me, Mr. Chairman, that the views of recent authors, so well presented by Dr. Crane, are far from being new. Bretonneau's researches on this disease were published more than thirty years ago. And the most eminent pathologists of all countries have adopted his diagnosis of croup, viz: a *false membrane* by exudation, which is *not* the result of inflammation, but the peculiar pathognomonic symptom of a specific disease of the blood, appropriately called *diphtherite.* He also demonstrated that though this disease may show itself by the exudation of a false membrane upon any of the mucous surfaces or the skin, when the cuticle is removed, it is, nevertheless, remarkably prone to show itself on the air-passages. Trousseau, the worthy pupil of Bretonneau, in his article on croup in the "Dictionnaire de Médecine," states that croup and pseudo-croup are not different degrees of the same disease, even though they are found prevailing at the same time and in the same place, and produced by the same cause.

In epidemic croup, authors agree in that the greater part of the inhabitants in the region of it have diphtheritic ulcerations; or if the cuticle be broken from any cause, false membrane forms on the denuded skin. Epidemic *malignant sore throat,* which is not gangrenous, was shown by Bretonneau to be follicular inflammation, similar to that of true croup; and he taught that the so-called gangrenous sore throat and croup are nearly always associated together in the epidemics of malignant sore throat, and that "croup" which was not characterized by false membrane, was *false* croup, or stridulous laryngitis.

There is not, so far as I know, any pathological distinction of epidemic from sporadic croup, and in this respect it is similar to other infantile diseases.

Diphtherite singularly comports in all respects with epidemic disease, and, excepting in rare instances or in epidemics characterized by great malignancy, it may be classed with the epidemics peculiar to children. Like them, it runs a regular course, is, generally speaking, self-limited, and not likely to occur more than once in the same subject. I am aware that many French physicians of high standing consider diphtherite a contagious disease; but they have in all cases failed to show a *certain* period of incubation—the best evidence of contagion.

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* See *N. Y. Journal of Medicine*, March and July, 1854; and Ranking's "Abstract," xxi. 50, Amer. edition, 1855; and Dunglinson's "New Remedies," 17th ed., p. 192.

Symptoms.—In children old enough to make their feelings known, chilliness is the first symptom to attract attention. This is followed by restlessness, febrile symptoms, pain in the throat, hoarseness and constant cough, often accompanied by nasal flux. At this epoch, false membrane is generally perceptible on the back of the throat or in the nostrils. This stage usually lasts four or five days, when there is increased febrile action and more constitutional disturbance. The cough is drier and comes on in fits, frequently ending in efforts to vomit, and the characteristic *croup*-like sound sends a thrill of distress at every breath.

Treatment.—Without a knowledge of the indication in croup, as in all other diseases, there can be no true application of therapeutics. There has been a time when the duration of croup was supposed to depend upon the promptitude of using the lancet and the degree of bleeding practised. But the assiduity of modern pathologists, adopting and expanding the views of Bretonneau, the first master in this disease, have at length succeeded in showing the worse than useless employment of blood-letting and its kindred remedies in any case of *true croup.* Blisters too, have now dwindled down to a mischievous utility in revealing the nature of the disease. Mercury, if the disease is not violent, so that the child lives long enough to obtain an alterative effect, may aid in detaching the membrane, by increasing the secretions; but to be of still greater utility, it should be combined with tartar emetic, that the membrane when detached, may be expelled.

Emetics, at the head of which, in this disease, I would place the one already named, are perhaps the most universally applicable of all remedies, to the diseases called croup. Because, if true croup, they aid the system mechanically in expelling the membrane; if false croup, they promote perspiration, produce anti-spasmodic calmative effects, and alike conduce to recovery in either case.

Tobacco, by smoking, when children are old enough, or as a fomentation in the younger, is a *specific* for *stridulous laryngitis*; but the remedy requires close watching, or it will produce excessive prostration.

An infusion of valerian and assafœtida injections are also excellent remedies for very young children with stridulous laryngitis.

In true croup, particularly, sulphuret of potassium, as an alterative, and nauseating doses of sulphate of copper, have been used, it is said with good results. But their advantages are not well proven.

Of topical applications, nitrate of silver has been more praised than any other remedy. It has been applied in strength varying from 20 to 150 grains to the ounce. And judging chiefly by cases recently reported in the "Boston Med. and Surgical Journal," its use in the latter stages of the disease, both by the sponge and by injection into the bronchi after tracheotomy, has been followed by recovery. But it is very doubtful whether any other irritant might not do fully as much toward exciting the expulsion of the membrane.

The latest writings of Bouchut record some experiments on false membranes which go to show that alkaline solutions dissolve it. An application of this knowledge seems indicated in the use of bronchial injections.

Strong acids, nitric, muriatic, etc., corrugate the membranes, and in that way favor its detachment; but by experiment, acids are found inferior to alkalies.

It is lately reported of Bouchut, also, that he has twice introduced a breathing-tube into the trachea, through the mouth, as a substitute for tracheotomy. One case soon after suffocated. The other, afterward, had the operation of tracheotomy performed and died. Finally, I argue, that no matter by what name a disease may be called, if it is of a poisonous origin, it should be treated as *blood*-poisoning. And if there are remedies capable of destroying or neutralizing this poison, they are of all others most appropriate. But if there are no such remedies, our next duty is to use such as will moderate the action of the poison upon the system. And next, we must aid the system in eliminating the toxic agent by the use of such remedies as will so alter the condition of the morbific matter, as to facilitate its being thrown off through the various excretory channels.

To accomplish these objects, viz.: produce that peculiar alterative effect on the blood, which either partially destroys or neutralizes the poison it contains, none seem to promise so much as quinine and the alkalies; indeed, the efficacy of both seems established. The first of these remedies is known to be of peculiar efficacy in all sorts of miasmatic poisoning, while its application in various other epidemic diseases are no less marked. Of the alkalies, the power they possess in preventing the coagulability of the blood is probably owing to some influences they exert over the fibrin in preventing its coagulability, and consequently its deposition.

I think there is much to expect from the early and bold use of these remedies, and would suggest a fair trial of the early and persistent administration of quinine with chlorate of potash, and the bicarbonates of potash and soda, as the most appropriate constitutional remedies. In addition to these, meeting of course all complications according to circumstances.

Dr. Newhaus spoke favorably of the use of alum in croup. He had given in several cases ℥ss. in solution in twenty-four hours, with marked benefit.

Dr. Burge made some remarks on the use of quinine in this disease, expressing the opinion that it was used with most advantage in warm latitudes. He also adverted to the vapor treatment.

Dr. Hart recommended the use of antimony and the alkalies, and the sulphate of copper; and proposed the inquiry why some families more than others, were afflicted with this malady?

Dr. Brooks inquired of Dr. Bell whether he was of the opinion that once having had membranous croup prevented a second attack. Dr. Bell replied that he thought the cases rare where patients had a second attack.

Dr. Chapman related two instances in which he introduced caustic into the larynx, repeating the operation two or three times in each case, when the false membrane came up with the sponge.

Dr. Morris inquired whether the caustic in these cases was introduced *far down* the trachea. Dr. Chapman replied, from *four to five inches.*

Dr. Bennet related a case occurring some time since, in which the false membrane was "*well formed*, and the patient in imminent danger; and he exhibited two grs. of tartar emetic. In forty minutes *active* vomiting *occurred*—large portions of membrane were ejected, and the patient was relieved."

Dr. Wade remarked, that in fifteen years he had seen but *one case that he knew to be membranous* croup. Dr. W. inquired what was the average duration of croup. Dr. Bell replied about five or six days, as given by authors.

Dr. Chapman proposed the inquiry, whether in *diphtherite* there was any excess of fibrin in the blood.

Dr. Isaacs replied, that the microscope revealed fibrin, and remarked further, that he considered *membranous* croup a specific disease.

March.—*Poisoning by inhalation of the dust of aconite root.*—Dr. Isaacs related the case of an apothecary's clerk, poisoned by the inhalation of the dust of aconite root, which he was pulverizing. The effects of the drug were first manifested by numbness of the tongue, and difficulty of swallowing—dryness and sense of constriction in the fauces. About an hour afterward, there was some difficulty of respiration, with diminution of the force and frequency of the pulse, greatly dilated pupils, and loss of voice, and prostration of strength. Very slight convulsions occurred at repeated intervals, for about five hours, at which time he was supposed to be dying. The countenance hippocratic—pupils very greatly dilated; pulse 36 and feeble, respiration correspondingly slow. There was, also, from the first, great oppression in the cardiac region. It is now two weeks since the attack, and the aphonia still continues.

The treatment consisted in the administration of stimulants, brandy, aromatic spirits of ammonia, etc.; sinapisms, frictions, etc. *pro re rata.*

Malignant pustule.—Dr. Bell reported a fatal case of malignant pustule, which appearing an the left angle of the mouth of a married lady, of feeble constitution, at thirty-four, steadily progressed, without being in the least influenced by treatment—quinine, wine, rum, etc., and proved fatal on the eighth day. The pustule was limited to the upper lip, first appearing on the left side, and gradually extended across, producing hardness and swelling of the right cheek, and alæ nasi—the patient gradually sinking, and incapable of reaction from the administration of stimulus. No part of the swelling maturated, although twice incised. The lip was of a dark gangrenous color, enormously swollen, and as hard as frozen flesh.

Poisoning by belladonna.—Dr. Johnson related a case of poisoning, in a child five years of age, by belladonna. The medicine was being given, by the parents, for its attributed prophylactic virtues, in scarlatina. It had taken several small doses, when, the parents being absent, a *teaspoonful of the tincture* was administered, at one dose, by a servant. The doctor was called half an hour afterward, and found the child in convulsions, with dilated pupils, and spasm of the pharynx. A mustard emetic was given as soon as possible, and the child recovered.

The experience of the members being called for, in relation to the *belladonna eruption*, Dr. Mitchell stated that he had frequently seen a redness of the face and fauces, under the use of belladonna, but he had never seen a distinct eruption. Dr. Bell remembered one case of distinct scarlatina-like eruption, which appeared and reappeared in a lady, taking moderate doses of belladonna for neuralgia. There was, in this case, no doubt whatever, as to the eruption being caused by the belladonna, as it soon disappeared when the remedy was left off, and recurred when it was resumed.

Sequelæ of scarlatina.—Two cases of sequelæ of scarlatina reported by Dr. Mitchell, shewed peculiar and interesting features.

In one, congestion of the brain supervened upon the subsidence of the eruption on the skin and of the malignant ulceration of the throat. The eyes were strongly congested and the left eye resumed its natural color when the cerebral congestion was relieved. In the right eye the redness, on the contrary, increased, and a thick, false, membrane was formed on the inner surface of the lower lid, completely investing it. The membrane was to all appearance like that previously observed in the throat. The cornea, irritated by this foreign substance, became inflamed, and subsequently perforated by ulceration. The case terminated fatally.

In the other case (a girl six years of age), about four days after convalescence was established, the patient became sleepless and excessively restless. The restlessness rapidly increased, and soon presented all the characters of violent chorea. Constant watchfulness on the part of her nurses was requisite to prevent her from harming herself and from throwing herself out of bed. Valerian, hyoscyamus, camphor, assafœtida, morphine, etc., in twice the usual dose were resorted to with counter irritation along the spine, with but partial and transient relief. Chloroform induced quietness only so long as it was inhaled. The inhalation of ether was almost without effect. Fowler's solution was then given in doses of three drops every three hours, and an ounce of lac assafœtida administered by injection. After the second dose the child slept quietly for several hours and woke without a recurrence of the troublesome symptoms. She is again convalescent.

As the sedative powers of assafœtida can scarcely be considered when compared with those of morphine, ether, and chloroform, he thinks the relief attributable to the arsenic.

PATHOLOGICAL SPECIMENS.—*Dissecting aneurism of the aorta.* —Dr. Isaacs presented a specimen with the following history: A lady, aged 38, who had always enjoyed good health, was engaged in lifting a dinner plate upon a high shelf, when she was suddenly seized with excruciating pain in the region of the heart, and great prostration. Her physician having been instantly called, gave her an anodyne—as the pain rapidly increased in severity, he administered chloroform, which relieved her, for perhaps half an hour, when the pain returned; she rapidly sunk, and died in an hour and a half after the time of the attack.

On opening the chest, about a pint of blood was found in the pericardium. An aneurism of the first portion of the aorta, within the pericardium, had given way, and the blood escaped into the cavity of the pericardium, through an opening in the walls of the aorta, not larger than a pigeon-shot. It was also found that the blood had insinuated itself between the middle (elastic) and the external coat of the aorta, and had separated these coats from each other, as far down as the point where the aorta pases through the diaphragm, thus constituting a *dissecting aneurism.* There was atheromatous deposit, to a considerable extent, in the walls of the aorta.

Cancer of the stomach.—Dr. Isaacs said his next specimen was from a case which occurred in the practice of Dr. Marvin. A man, aged 45, had suffered for many months with pain in the stomach; on examination, a small tumor was discovered, which was diagnosed as cancerous. On opening the stomach, a cancerous tumor was found at the pyloric orifice. The stomach was greatly hypertrophied. The head of the pancreas was involved in the disease.

Cystic disease of the breast.—Dr. Isaacs presented a third case as follows: A married lady, aged 40, had suffered from dull pain in the left breast, for about six months. About two years previously, the part had been struck by the hand of a child. Upon examination a small portion of the breast, involving the nipple, was found to be knobbed and irregular. *There was frequent but slight hemorrhage from the nipple.* All remedies having failed to relieve the patient, Dr. Isaacs removed the breast. This was found to contain several cysts, of the size of large peas, filled with fluid blood. Several lactiferous ducts could be traced running out of these cysts, and terminating on the surface of the nipple. There was no suspicion of cancer.

Remarkable case of perforation of the œsophagus and penetration of the lung by a chicken-bone, causing fatal hemorrhage.—Dr. Dudley presented this specimen. On the 30th of January last, he was called to see a gentleman suffering extremely from gastric distress. The day previously, he had dined hastily, and while very hungry, upon a very tough chicken, one of the pieces of which, he said, stuck in his throat and he experienced great difficulty in swallowing it. When first seen, he had had no vomiting, but complained of pain in stomach and bowels—was relieved by calomel and opium. Next day was taken with vomiting blood and severe pain in the bowels; tenderness on pressure. Dr. Isaacs was called in consultation; he was cupped, warm fomentations were applied, anodynes freely given, etc., etc. It was noticed that the heart's action was now irregular, intermitting every third stroke. In the evening he was better, apparently in every respect; was called early next morning and found him sinking. He died about an hour afterward.

Autopsy, by Drs. Isaacs, Dudley, and Mitchell.—On opening the abdomen, the stomach and small intestines were nearly filled with black, and semi-coagulated blood. In the chest, a large portion of the left lung was strongly adherent to the costal pleura, and to the posterior mediastinum. The right lung was healthy. Some atheromatous deposit in the aorta; mitral valve somewhat thickened. On further examination, to discover the source of hemorrhage, a chicken-bone, with bifurcations, each about an inch long, and the extremities of which were very sharp, was found in the œsophagus. As the lungs were adherent to the posterior mediastinum, and consequently in close proximity to the œsophagus, the bone, in the convulsive actions of swallowing, had cut through the walls of that organ, and passed directly into the substance of the left lung, the vessels of which continued gradually to pour out blood, which passed down, distending the stomach and bowels. He had made very little complaint of his throat, and only occasionally referred to it, as feeling somewhat roughened or scraped by what he considered to be a very tough piece of the chicken.

Abscess of brain.—Dr. Landon said, this patient was a German, 21 years of age—a clerk; had been in bad health for some years. Two weeks since, he fell suddenly upon the floor—was supposed to be in an epileptic convulsion. He was attended about ten days by a physician, and then removed to the hospital.

March 6th.—He was in a collapsed state, extremities cold, rigors, pupils partially dilated, pulse extremely weak, mouth partially distorted—complained only of pain in the head—tongue greatly coated—warm air bath was directed, with stimulants, rallied partially, but afterward gradually sunk, and died the next day. On autopsy, an abscess was found in the right hemisphere of the brain, about the size of a hen's egg. There had been no previous injury, nor had any paralysis been observed.

Apoplectic clot.—Dr. Johnson exhibited the brain of a patient at 70, who had died of apoplexy. When 23 years of age, she had suffered from an apoplectic attack, which was followed by hemiplegia—she afterward married and had children. On opening the head, an old apoplectic clot was found in the brain—it was surrounded by a very firm cyst—several spiculæ of bone were observed in the neighborhood of the cyst.

Dilatation of pelvis of kidney.—He also presented a rare specimen of excessive dilatation of the pelvis of the kidney, and abscess of the supra-renal capsules; cause not ascertained. Patient suffered frequently from retention of urine; ureters were enormously enlarged, as well as the pelvis of the kidney. Cause of death was double pneumonia.

Dr. Isaacs related a case where the patient (a negro) had a contraction of the orifice of the urethra, arising from chancre. The urethra, the bladder, the ureters, pelves of the kidneys, and these organs themselves, were enormously dilated; they formed immense sacs, while the ureters were as large as the ilium.

April.—*Enlargement of the middle lobe of the prostate gland.*—Dr. Isaacs presented a specimen of disease of the prostate gland. About 4 months ago, he was called by Dr. Mason, to see a man. 49 years of age, who had been for 8 months under homœopathic treatment, on account of obstruction to the passage of urine. His bladder was constantly distended, and the urine continually escaping from him in small quantities. No remedial measures had been adopted, with the exception of giving him infinitesimal globules. A catheter was at once introduced without the least difficulty, and three pints of urine escaped, mixed with much mucus. He lived three weeks afterward. On dissection, the bladder was much thickened, the muscular fibres hypertrophied, with some small pouches. The third lobe of the prostate gland was of the size of a musket-ball, and when the bladder was distended this lobe was pressed forward, and against the orifice of the neck of the bladder, thus completely shutting off the exit of the urine. *No other part of the gland was enlarged.* This condition is believed rarely to occur. The ureters were greatly dilated, the kidneys very small and contracted.

Fatal hemorrhage from the uterus and appendages.—Dr. Isaacs presented another specimen, for which he was indebted to the kindness of Dr. Rowland. A young lady, 25 years of age, had suffered from a menorrhagia for 6 or 8 months past, would frequently pass clots of blood, of the precise shape and size of the cavity of the unimpregnated uterus. Remedies were unavailing, and she died in an anemic condition.

Autopsy.—A clot of blood was found escaping from the uterus, having the form of the interior of that organ—being in fact a perfect cast of it—the whole of the uterus, its internal and external surface, had a blanched appearance. The fallopian tubes were filled with blood. One ovary was so much infiltrated with blood, that it was perfectly black, and as large as a small orange. The other ovary was only slightly enlarged, but half of it was distended with black blood. There can be little doubt that the long continued irritation and congestion of the ovaries, determined a strong afflux of blood to the uterus, and a profuse escape of the vital fluid from that organ. *The cause* of the ovarian irritation is not known. The patient apparently died from exhaustion, from the repeated and excessive loss of blood.

Art. VI.—*Remarks on the Pathology of Croup and its Treatment by Quinine.* By H. N. Eastman, M.D., Prof. of Theory and Practice of Medicine in the Geneva Medical College.

My attention was painfully awakened to the subject of croup, in the earlier part of my practice, some seventeen years ago, by the death of my eldest child, and then only daughter, about three and a half years of age, who fell a victim to this terrible disease of childhood; and from that time forward to the present, the same earnest attention and careful observation have been constantly kept alive, from the fact, that all my succeeding children, eight in number, have been subject to repeated and frequent attacks of this same malady. This circumstance, and the prevalence of the disease in the section of country where I reside, during the cold season of the year, have led me to a careful observance of all its phenomena, and the effects of the different modes of treatment, and resulted in my present conclusions, as to the received pathology and treatment. These views are solely the results of my own observations and reflections.

I consider the division of croup into two distinct forms, spasmodic and inflammatory, as false in theory and pernicious in its practical tendencies and consequences. It must be obvious to every reflecting mind conversant with the subject, that in croup, as in many analogous cases, the first link in the chain of morbid action is *congestion* of the mucous membrane of the larynx and upper portion of the trachea, one or both, the phenomena of which are, first, preternatural dryness of the part from arrested normal secretion; next, a thickening of the membrane of the same; the former state producing merely the characteristic *dry* cough; the latter, by lessening the capacity of the passage, causing, to a greater or less extent, the distressing dyspnœa, supervening more or less severe, according to the intensity of the morbid action. This state of congestion may, and often does, pass off with or without treatment—the inflammatory stage, or that which is attended with structural change, to wit, permanent thickening of the membrane, or the exudation of coagulable lymph, not supervening—followed by a free secretion of mucus. Sometimes no appearance of disease succeeds the first paroxysm; more commonly, however, a second attack supervenes after an intermission of some twenty-four hours from the outset, or about the same hour of the day or night following, with increased severity, and this in turn is followed by others in like manner, at pretty regular intervals, till the abnormal state merely remits, and finally becomes continuous, as the inflammatory action fairly sets in, attended with an uninterrupted and increasing sense of approaching suffocation on the part of the little sufferer, the result of deposition of lymph in the form of false membrane in the larynx and upper portion of the trachea, and not unfrequently that of muco-purulent matter in the lower portion, and in the commencement of the bronchial tubes. On the other hand, croup does not always make its appearance in this regular congestive manner. Sometimes the stage of congestion is slight, or not well marked, the inflammatory action approaching insidiously, so that the morbid exudation of coagulable lymph is noticeable almost as soon as the peculiar cough and wheezing are observed. These are doubtless the most alarming and intractable cases, from the fact that the formative, and I may add, curable stage, is passed before medical aid is brought to bear on the case; for it is especially true in croup, as in other diseases of like gravity, that the time for the successful action of remedies is before the structural changes have taken place; if these are allowed to occur, our best efforts will be, in a large majority of cases, entirely fruitless. Hence has arisen the opinion of the incurable nature of inflammatory croup, or at least, of a large proportion of the cases, as entertained and asserted by some of our most eminent writers on the subject. Hence also the pernicious theory of the two distinct forms of the disease, which leads the friends, and too often the physician, into a fatal inactivity, or inefficient treatment, during the only time for successful medication, leading them to regard the first, or congestive stage, as a distinct, and, comparatively, not dangerous disease. I submit the question to every careful observer, if he has not found it true in his practice, that most, if not all, of the fatal cases of croup he may have encountered, did not pass from the so-called spasmodic form, into this continued or inflammatory state.

The periodical character of the congestive stage of croup is usually well marked, and has led the writer to what he regards a more rational course of treatment than that generally practised and taught in our schools, and by writers on the subject. All who are familiar with this disease, must admit that I have given above a fair history of the onset and course of croup as it ordinarily exists with us; beginning, to recapitulate, with periodical congestion, and finally, as the periodicity becomes less distinct and marked, passing into the continued or inflammatory stage, characterized by uninterrupted husky cough, dyspnœa, and deposition of false membrane, and but too often terminating in death—that is, when suffered to run its legitimate course, unsubdued in the first or congestive stage.

Case 1.—Some eight years ago, my eldest daughter, then a child about four years old, was attacked with croup, much in the same way as was a former child, above referred to, and who died in about one week from the onset. The paroxysms were rather mild at first, assuming a periodical form, increasing in intensity from day to day, losing, as time advanced, more and more their paroxysmal form, taking on, gradually, the continued type or inflammatory character. All the ordinary remedies were early and effectually employed—as emetics, baths, mercurial purges, hot fomentations, blisters, etc., and were repeated as the case seemed to demand, the disease, meantime, progressing nevertheless, in spite of remedies, toward a fatal termination, in daily recurring, though less distinct, exacerbations and remissions, the fever assuming more and more a continued type. Losing all confidence in established practice, and reflecting on the effect of quinine in periodical diseases of every description, I resolved to try its effects in the case, confident that no harm could follow its administration, as things were. I accordingly gave five grains, by weight, some three hours before the expected exacerbation, repeating the same quantity in one hour after. At the time anxiously looked for, as that of the approaching paroxysm, no signs of its return were manifested; a cool sweat bedewed the child's face, the breathing remained soft and pleasant, and, in fine, no symptoms of the return of the croupy state appeared; a calm, sweet sleep supervened, and the little patient awoke next morning every way better in appearance. I pursued the same course on the following afternoon, lest there should be a recurrence of the symptoms, with equally satisfactory results, after which, convalescence went on without interruption. This circumstance made a deep impression on my mind, and I resolved to test this treatment as occasion might be subsequently presented. A favorable opportunity was soon afforded, and similar results followed the same course; and in every succeeding case of croup, up to the present time, a repetition of this simple plan of medication, when it could be fairly put in practice, and carried out, has been uniformly followed by results that have served to confirm my confidence in the course pursued; and I have yet to find the first case, where this course was adopted in due time, that is, while any considerable exacerbations and remissions still remained, that did not completely yield to the treatment in question. Even in a few cases where the disease had assumed a continued form, with uninterrupted dyspnœa and fever, I have succeeded in arresting its fatal course by the exhibition of ten or twelve grains of quinine, in divided doses, at equal intervals during the twenty-four hours; though as a general thing, little hopes of success can be entertained after the case has put on a continued type, from any treatment that may be put in requisition.

I have spoken of the precise quantity of quinine—ten or twelve grains. This amount I do not hesitate to give a child from one to two years old, within the space of two or three hours. I was at first surprised to see this large quantity borne by infants of such an age, without the least appearance of any unpleasant or specific effects. When I have given this amount, and even more, to children three and four years of age, I have never been able, by the most careful inquiries and observations, to discover that any headache or singing in the ears was experienced by the little patients; in fact, a complete tolerance of the medicine seems to exist in such cases.

When called during a paroxysm, I formerly employed emetics, and the other ordinary means usually resorted to in attacks of croup, to arrest the exciting symptoms: and as these passed off, I waited for further developments before resorting to the use of quinine, inasmuch as the disease sometimes, not unfrequently, perhaps, does not reappear after the first intermission; if a second attack supervened, I repeated the same course, and as the intermission or remission, as the case might be, again appeared, I was careful to administer the amount of quinine above specified within two or three hours before the time anticipated for the return of the paroxysms or exacerbation of dyspnœa. More recently I have ceased, as a general rule, to employ emetics, since they often render the stomach intolerant of the quinine, and thus prevent us from resorting successfully to what I regard as the chief indication in the treatment, viz., the preventing of the return of the succeeding paroxysms, thus cutting short the disease; and besides, I find that the exhibition of a full dose of calomel, followed by the warm bath, continued a sufficient length of time—twenty-five or thirty minutes—produces, for the most part, all the relief that can be afforded by the most active emetic, without any of the unpleasant results so often following its use, as protracted nausea, and sometimes alarming prostration. When means are not at hand for the exhibition of the ordinary warm bath, enveloping the little patient in a warm, or rather hot wet sheet, surrounded by a dry blanket to prevent too rapid evaporation, for an hour or two will answer much the same purpose.

General bleeding will seldom be resorted to in the case of infants or very young children, at the present time, when few adults are found to bear loss of blood. I regard tartarized antimony as of doubtful utility or even safety, in case of any but very robust young children. The sub-sulphate of mercury I believe a far safer and better article, when an emetic is administered in such cases; but I consider the treatment recommended above as superseding all these last means, far more effectual, and perfectly free from all hazard. In all ordinary cases, the first paroxysm will pass off safely, with little or no medication even. I therefore regard the prevention of the succeeding ones as the great object to be effected, rather than the arrest of the first attack; just as the chief object in the treatment of intermitting fever is to prevent the succeeding chill, rather than cut short the existing fit.

I am not aware that any of my professional brethren around me have adopted this course, or that any writer has recommended it. Many give quinine freely in the latter stages of croup, as a support, but never as an anti-periodic, in the early stage of the disease, to cut short its progress; if such a course of treatment has been suggested or adopted by any one heretofore, I am not aware of the fact; the plan was simply the result of my own reflection, and careful observations, through a long series of years, have only served to confirm me in my conclusions. I have uniformly treated croup for several years past in this way, with as much confidence of success as I treat ague and fever, or any other intermitting disease; and in no one instance have I been disappointed in the result, when called in the early, or what I regard as the paroxysmal or congestive stage. It may be said that my observations prove that croup is but a form of malarious disease, endemic in this region, or that it is more or less affected by the periodical character of the disease in malarious districts. Be it so; I only claim to judge of the phases of the malady as it exists in the region of country where I reside.

Since writing the above, I have been exceedingly interested in reading a quotation from a monograph of Prof. E. R. Peaslee, of New York, in the last edition of Watson's "Practice," page 553. The author's views, as there expressed, on the Pathology of Croup, differ widely from the doctrines generally held; and correspond more nearly to my own, long since entertained, and given above, than any views I have seen put forth by any one else: that is, that croup is simply a laryngo-tracheitis—that all croup is inflammatory, whether productive of false membrane, pus, or otherwise; substantially the same in the case of the infant and the adult, where it has been denominated laryngitis, differing only in anatomical extent, character and situation of the secretions, depending in this respect on the peculiarities of age and state of the fluids preponderating in each; always preceded by more or less *congestion* and *irritation, attended* with a greater or less degree of spasm, as an effect, rather than the disease itself; in short, that there is no such thing as spasmodic croup, unless we call mere laryngismus by that name, a disease very different, I apprehend, from what is described by writers and regarded by practitioners as spasmodic croup.

I could hardly have given a more accurate description of my own opinions of the pathology of croup than the above, so far as this description goes; and it only remains to note the periodical type, in the early or congestive stage, to make the description complete. I cannot but believe that, should this paper meet the eye of that learned gentleman, he will be led to note this peculiar feature of the disease, and thereby be induced to make a satisfactory trial of the quinine treatment, in doing which, I have not the least doubt, he will arrive at the same conclusion that I long since formed.

In conclusion, I will relate briefly one case, that of an adult, in which laryngitis was treated in the manner above recommended for infantile laryngo-tracheitis, with prompt and complete success.

Case 2.—Some fifteen months ago, I received a telegram to visit, forthwith, the wife of a very respectable physician, residing near the village of Athens, Pa., about twenty miles distant. I arrived within two hours, and found Mrs. ——— laboring under a very considerable continued dyspnœa from acute laryngitis; had been ill several days. She was a feeble woman, had been previously subject to similar attacks, though far less severe and alarming than the present. In addition to the croupy cough and continuous urgent dyspnœa, paroxysms of increasing severity occurred at about 6 o'clock P.M. of each day, as I learned, each one threatening immediate dissolution. These distressing turns would remit, somewhat, after an hour or two, to return with still more vehemence the next day. She had been treated with antimonials, mercurials, cathartics, blisters, etc., etc., most thoroughly, and all to no purpose. I suggested quinine in three gr. doses, commencing immediately (10 o'clock, A.M.), every two hours till four o'clock P.M., twelve grains in all; the same course to be repeated next day, beginning an hour earlier.

I learned from her husband, that the paroxysm on the day I left came on some hours earlier than was expected, so that but two or three doses of the quinine had been given before its onset; and consequently she was not brought under the full influence of the medicine; still, the paroxysm was decidedly lighter. On the next day due precaution was taken to give the proposed quantity some hours before the expected exacerbation. No paroxysm appeared from that time forward; the peculiar cough and dyspnœa gradually passed off, and no return of the disease has since occurred. I saw her a few weeks ago, for the first time since her sickness, and found her in the enjoyment of better health than formerly.

Owego, Tioga County, New Yo .

ORIGINAL LECTURES.

LECTURES ON VENEREAL.

Delivered at the College of Physicians and Surgeons, of the University of the State of New York.

By FREEMAN J. BUMSTEAD, M.D.,
SURGEON TO ST. LUKE'S HOSPITAL.

Lecture III.

Treatment of Urethral Gonorrhœa in the Male: Abortive Treatment of First Stage—Kind of Syringe to be preferred—Mode of injecting—Weak and Strong Injections—Dr. Stewart's Instrument—Appreciation of this Method.

Gentlemen: Having described the symptoms of gonorrhœa in the male, in my last lecture, I come now to its treatment. This must be varied according to the general condition of the patient, and especially according to the stage of his disease.

During the first few days after exposure, varying in number from one to five in different cases, before acute inflammatory symptoms have set in, while the discharge is but slight, and chiefly mucous, and while yet there is no scalding in passing water, you may resort to caustic injections, for the purpose of exciting artificial inflammation, and supplanting the diseased action. This is known as the abortive treatment of gonorrhœa. This treatment has been inordinately praised, and as violently attacked; its due award of merit is probably to be found between these two extremes. It is certainly liable to be greatly abused, and under such circumstances is generally unsuccessful, and may induce the most unpleasant consequences; but when limited to the early stage of the disease, and used with proper caution, I regard it as a highly valuable method of treatment, and undeserving the opprobrium which has been cast upon it by some authors.

In employing the abortive treatment, there are several points which you will do well to recollect:—1. The disease, in the stage to which this treatment is applicable, is limited to the anterior portion of the urethra, known as the fossa navicularis, or extends but a short distance beyond it; it is not necessary, therefore, that the injection should reach the deeper portions of the canal. 2. For the treatment to be successful, the whole diseased surface should receive a thorough application of the injection, for if any portion of it remain untouched, it will secrete matter that will again light up the disease. 3. When once a sufficient degree of artificial inflammation is produced, the caustic has accomplished all that can be expected of it, and should be suspended.

Since a solution of nitrate of silver, which is commonly used in the abortive treatment, is readily decomposed by contact with metallic substances, metal syringes should be avoided. Glass syringes, if well made, answer every purpose ; but as found in the shops, they are apt to be unequal in calibre in different parts of the cylinder, the wadding of the piston contracts in drying, and a portion of the injection escapes being thrown out, as is seen by its overflow when the syringe is filled a second time. For these reasons, I now never advise a patient to purchase a glass syringe, knowing that it will probably give him much annoyance, and perhaps prevent his deriving benefit from treatment. Fortunately, we have a very excellent substitute in the hard-rubber syringes which can now be obtained at the druggists'.*

The solution of nitrate of silver to be used in the abortive treatment of gonorrhœa, may be of considerable strength, when only one injection will be required ; or, it may be weak, and in that case should be repeated at short intervals until the effect produced be sufficient. I much prefer the latter course, especially with patients who apply to me for the first time, since it enables me to graduate the effect according to the susceptibility of the urethra, which varies in different persons. The following is the formula for the weak form of injection :

℞. Argenti nitratis crystalli gr. j–iss.
Aquæ destillatæ ℥vj.
M.

With this, as with all injections in gonorrhœa, it is essential to success that you should either perform the injections for your patients, or see, by actual observation, that they know how to use them. Verbal directions cannot be relied upon.

The patient should be made to pass his water immediately before injecting, or, better still, a quarter of an hour before. We wish to clear the urethra of matter, and it is also desirable to have the bladder empty, so that the injection may have some time to act before it is washed away by another passage of the urine, and yet a short interval between the last act of micturition and the injection is advisable, in order that as much of the urine as possible may have drained from the

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[*] A series of urethral syringes is manufactured by the American Hard Rubber Company, which may be said to be perfect. The diameter of the cylinder is in all parts the same; the piston works with great accuracy; the material is not acted upon by ordinary medicinal agents, and the different sizes and forms of the instrument are adapted to the various purposes for which it is required. The size most generally applicable for the treatment of gonorrhœa is called "No. 1, B." It holds half an ounce, which is not too much for injections in the latter stages of the disease; if used in the abortive treatment of the first stage, it should be only half filled. "No. 1" holds two drachms, and is well adapted for the abortive treatment. The "Urethral Syringe with extra long pipe," is, in fact, a syringe united to a catheter, and is adapted for injections of the deeper portions of the canal or the bladder. The catheter portion may be bent to any curve desired, by first heating it over a spirit-lamp. These syringes may be obtained of most druggists.

canal and little be left to decompose the nitrate of silver. The prepuce should now be fully retracted, and the glans penis exposed. The latter should be wiped dry, so as to afford a firm hold to the thumb and fore-finger of the left hand, which are applied to its opposite sides, and which firmly compress it around the point of the syringe, introduced to its full extent within the meatus. If this pressure be properly made, not a drop of the solution will be lost, as the piston of the syringe is slowly forced down by the fore-finger of the right hand, which holds the instrument, and the whole contents will be discharged into the canal. The syringe should now be withdrawn, and the fluid still retained for a few seconds by continuing the compression of the glans. When the injection is allowed to escape, it will be found to be of a milky-white color. This is due to the partial decomposition of the contained salt by the remains of the urine and the muco-pus in the canal. As this decomposition has prevented the application of the injection in its full strength to the urethral walls, a second syringeful should be thrown in, and this should be retained two or three minutes. During this time, a finger of the disengaged hand should be run along the under surface of the penis *from behind forward*, so as to distend that portion of the canal occupied by the injection, and insure the thorough application of the fluid to the whole mucous surface.

This description of the method of using the syringe is, in the main, applicable to all the injections which may be required in the course of a gonorrhœa; but we are now speaking of the abortive treatment, by means of weak injections of nitrate of silver. We will suppose that this first injection has been administered by the surgeon, who, at the same time, has explained the various steps to the patient. The same directions with regard to diet, etc., that will presently be mentioned in speaking of the second stage, should now be given; the patient should be ordered to repeat the injection every three hours, and it is best that he should be seen by the surgeon twice a day for the present. It is also well at this time to administer a free purge.

The first effect of these caustic injections will be manifested in a few hours; the discharge will become copious and purulent, and considerable scalding will be felt in passing water. In the course of twenty-four or thirty-six hours, however, the discharge will become thin and watery, and, very likely, be tinged with blood. It is now time to stop the injection and omit all medication for a few days, till we see how much good has been accomplished. If the treatment have been as successful as it generally is, the discharge will gradually diminish, and finally disappear in from three to five days. Sometimes, however, after growing less, it again increases, showing a tendency to relapse. In that case, I usually advise weak injections of sulphate of zinc, as recommended in the third stage of the disease. Some authors prefer to resume the caustic injections, and in the same manner as before, if, after a week has elapsed, any traces of the discharge remain.

The chief objection to this modified method of employing the abortive treatment is, that it is necessary to leave the administration of most of the injections to the patient, who may be prevented by ignorance, or the requirements of his occupation, from using them as thoroughly or as often as is necessary. If we have reason to fear this, we may resort to a stronger solution of the nitrate of silver, and inject it once for all, with our own hands. It was this method of employing the abortive treatment that was recommended by Debeney of France, and Carmichael of England, who first introduced this treatment to the profession. The same method is also still employed and highly recommended by many surgeons, and especially by M. Diday of Lyon. The formula for this strong injection should not contain less than ten grains of the nitrate of silver to the ounce of distilled water, and more than fifteen grains are objectionable, unless with patients who have been under treatment before, and whose urethræ have been found to be quite insensible.

℞. Argenti nitratis crystalli, gr. x–xv.
Aquæ destillatæ, ℥j.
M.

The mode of using this injection is identical with that already described. Two small syringefuls should be thrown in; the first to clear the urethra of urine and muco-pus, the second to exercise a curative effect; and the surgeon should feel that the success of the treatment depends, in a great measure, on the thoroughness of its application. As an additional precaution against the fluid extending further back than is necessary, the penis may be compressed by the patient's fingers anteriorly to the scrotum, while the surgeon is administering the injection.

There is still another mode of employing a strong solution of nitrate of silver, viz., by means of an instrument introduced by Dr. F. Campbell Stewart of this city, and called by his name. This instrument consists of a straight canula inclosing a sponge, which can be made to protrude from its extremity. The sponge is first soaked in the solution of nitrate of silver, and then concealed within the canula. The instrument is then introduced for about two inches within the urethra, when the canula is to be partially withdrawn; the sponge is thus exposed to the contact of the urethral walls, in which position it is to be allowed to remain for a minute or two, and then finally withdrawn by slowly twisting it on its long axis. By the use of Dr. Stewart's instrument, the extent of the application can be limited at will, and it is perhaps owing to this fact that we can employ a much stronger solution with safety than when using a syringe. I have thus applied a solution of the nitrate of silver of twenty, and even thirty grains to the ounce, without exciting an undue amount of inflammation, or other unpleasant symptoms. Care should be taken that the instrument be of sufficient size. Some of those found in the shops are too small, not exceeding a No. 7 bougie in diameter. I have had one manufactured for my own use of the size of No. 10.

I cannot leave this subject of the abortive treatment of gonorrhœa, without again expressly stating that I recommend it only in the first stage of the disease, and not after acute inflammatory symptoms have set in, or the patient suffers from scalding in passing water. Its inventors did indeed advise its employment in all stages of gonorrhœa; but when used in the inflammatory stage it is not generally successful, and dangerous and even fatal results have been known to occur. Prudent practitioners have limited it to the early stage, or employed it in the decline of the disease; but in the latter case, the mode of injecting must be modified, so that the fluid may reach the deeper portions of the canal. Unfortunately, the majority of patients do not seek advice till after the first stage has passed, and when it is too late to employ the abortive treatment; but when they apply sufficiently early, this treatment, used with the precautions I have indicated, is, I believe, not only harmless, but, in most cases, efficient in cutting short the disease. The pain attending its application at this time, when the inflammation is but slight, is by no means intolerable; there is no danger of exciting swelled testicle, for this complication is confined to a later stage, when the deeper portions of the canal are involved, and the shortening of a disgusting disease, which is prone to last for weeks or even months, is a most desirable end to be attained.

It not unfrequently happens that when patients seek advice a few days after connection, their symptoms are so slightly marked as to leave us in doubt, whether they are about to have an attack of gonorrhœa, or whether the symptoms are due to a small amount of urethral or vesical irritation, which will pass off of itself if let alone. In a few such instances, I have known the symptoms to disappear without treatment, but, in most cases, I have regretted any delay in the use of remedies, for when the disease has declared itself beyond a doubt, it has generally been too late to resort to abortive measures. It is well to inform patients who are in the habit of consulting us, of the early symptoms of gonorrhœa, and of the advantages to be derived from early treatment, in order that they may be induced to seek advice before acute inflammation has set in. In this way many of those tedious cases which last for months and wear out the patience of both patient and surgeon, may be avoided.

LECTURE IV.

Treatment of Urethral Gonorrhœa in the Male, continued: Treatment after the Disease is fairly established; Regimen; Antiphlogistic Measures; Injections—Objections to, answered—Of Opium—Astringents—Formulæ for.

The proper regulation of the diet, exercise, and mode of life of the patient, are of the first importance in every stage of gonorrhœa. In the treatment of the inflammatory stage, as well as in the abortive treatment of the first stage, if the patient can keep his bed for a few days, half the battle is won. The advantages of absolute repose and quiet should be placed prominently before him, and every inducement be offered to lead him to avail himself of them. Yet in practice, we find that very few will submit to this constraint. It is very well to say that every patient that puts himself under the care of a physician, should follow his advice implicitly in all things; but we must take the world as we find it, and the calls of business, or the necessity of secrecy, often render the insistence upon such stringent rules impossible. When they feel that their life is in danger, men absorbed in business will stay at home, but not for an attack of gonorrhœa. This indeed should not prevent our doing our best to persuade them, but we shall succeed in but a minority of cases.

Exercise of all kinds should be avoided as much as possible; walking, dancing, riding on horseback, and standing—in the street, at the desk, at a party—are all injurious. Riding is certainly less objectionable than walking, and yet a long ride, even in a rail-car, often aggravates a gonorrhœa or induces a relapse when it is apparently well. At home, and at the store or office, the recumbent posture should be assumed as much as possible. It is highly important, also, that the genital organs should be well supported by a suspensory bandage. The kind of bandage is immaterial, provided it fit well and do not chafe the parts: of which conditions the surgeon should satisfy himself by actual observation. While the more acute symptoms continue, the diet should be exclusively farinaceous; and meat, stimulants, asparagus, coffee, and acids be forbidden. The perusal of all books calculated to excite the passions, and the company of lewd women, even if no improprieties be indulged in, should be strictly interdicted. The last-mentioned caution is not generally given unnecessarily.

At the commencement of the treatment of a case of gonorrhœa in the acute stage, it is well to administer a free purge, as five grains of calomel combined with ten of jalap, a full dose of Epsom salts, or three or four compound cathartic pills of the U. S. P. If the inflammatory symptoms be severe, marked benefit will be derived from the application to the perineum of half a dozen leeches, but they are rarely absolutely necessary. Care should be taken to keep the head of the penis free from any collection of matter, lest balanitis be excited by its presence or the disease be aggravated. A pair of triangular-shaped drawers, like ordinary swimming drawers, worn next the skin, affords the best protection to the patient's linen. Water, as hot as can be borne, is the most grateful local application that can be used. I have found it afford great relief to the scalding in micturition and the local pain and uneasiness, and can fully indorse Mr. Milton's statement with regard to it. "The only direct application which I can safely say has never disappointed me, which is at once safe, simple, and useful, is that of very hot water to the penis. But to obtain the really good effects it offers, the water must be hot, not luke-warm. In fact, we seldom see so much good ensue as when it is carried to the extent of producing some excoriation and faintness; thus applied, and especially in the early stages of the disease, the weight felt about the testicles soon disappears, the pain on making water and using injections is soothed, and the prepuce and glans rapidly regain a more normal temperature and color."—Milton *on Gonorrhœa*, p. 21.

After the operation of the cathartic, we may, in most cases, commence at once with copaiba or cubebs, rules for the exhibition of which will presently be given at length. If, however, the penis be still much swelling, and the scalding on passing water severe, we may defer the exhibition of the anti-blennorrhagics for a few days, and administer alkalies or diuretics, either alone or combined with sedatives, for the purpose of rendering the urine less irritating by diminishing its acidity, or diluting its contained salts by increasing its quantity. Again, both these classes of remedies may be given at the same time. From one to two drachms of the chlorate, acetate or nitrate of potash, or two or three drachms of liquor potassæ, may be added to a pint of flax-seed tea; and the patient be directed to take this quantity in the course of twenty-four hours. The following is also an excellent formula:

℞ Potassæ bicarbonatis, ʒij.
Tincturæ hyoscyami, ℥j.
Mucilaginis acaciæ, ℥v.
M.
A table-spoonful every three hours.

Do not mix tincture of hyoscyamus and liquor potassæ in the same prescription, since the effect of the former is destroyed by the presence of a caustic alkali.* In this stage of the disease, Mr. Milton highly recommends the following:

℞ Pulv. potassæ chloratis, ʒij.
Aquæ bullientis, ℥v.
misce, et adde—
Liquoris potassæ, ʒij.
Potassæ acetatis, ʒij. ad ʒv.
misce et cola.
One ounce three times a day.

If the bowels be not freely open, Mr. Milton adds powdered rhubarb to each dose of this mixture, in sufficient quantity (gr. v. ad ℈j.) to produce two or three loose stools daily. The following is another formula recommended by Mr. Milton:

℞ Potassæ acetatis, ℥j
Spiritûs ætheris nitrici, ʒij.
Aquæ camphoræ, ℥vj.
M.
One ounce three times a day.

I refer thus frequently to Mr. Milton, because he has carefully examined into the merits of the different remedies used in gonorrhœa, and has given us the results in statistical tables, which I have usually found to correspond with my own experience. An elegant and convenient method of administering an alkali is by means of Brockedon's wafers of bicarbonate of potassa, of which two may be given after each meal. The only objection to them is the expense.

If the penis be much swollen and florid, the meatus contracted by the distension of its walls, and the urethra in a state of great sesibility, the above general measures should constitute the only treatment, and no local remedies, with the exception of hot water, be resorted to, until the inflammation has somewhat subsided. In the majority of cases, however, especially when the patient has had gonorrhœa before, the local symptoms are less severe, even in the acute stage, and the point of a syringe can be gently introduced within the canal without exciting much pain. When this is the case, an injection containing glycerin and strongly opiated, will be found to afford great relief to the local pain and uneasiness, and hasten the subsidence of the inflammatory symptoms, and the diminution of the discharge. I can speak very decidedly in favor of this application and of its perfect safety; but the opium must not be added in the form of tincture, or the presence of alcohol, which is an irritant, will counteract its effect; and the fluid is to be injected with gentleness, and not with such force as to painfully distend the canal. The following is the formula that I use:

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* See "Pereira's Pharmacologia," Ninth Edition, p. 51[illegible]. This fact has recently been brought forward as new, and confirmed by actual experiment, by Dr. Garrod: "Medico-Chirurgical Transactions, Second Series, vol. 2[illegible]:" London, 1858.

℞. Extracti opii, ℈j.
Glycerin, ℥j.
Aquæ puræ, ℥iij.
M.

Injection to be used after every passage of urine.

In many cases of a sub-acute form, half a grain or a grain of sulphate of zinc may be added to each ounce of this mixture, even at the outset, and there are but few cases in which it may not be thus added in the course of twenty-four or forty-eight hours, when the inflammation, local pain, and scalding are generally found to be much improved. If the case continue to progress favorably, the quantity of the astringent may be gradually increased, and that of the opiate diminished; and the treatment should be continued according to the rules laid down for the third stage, to be mentioned presently.

While pursuing the treatment of the acute stage of gonorrhœa, care should be taken that antiphlogistic measures be not too long persevered with. It should be remembered that the natural tendency of the disease is to lower the tone of the system, and a condition of debility in turn reacts on the disease and prolongs its duration. We often meet with patients who have treated themselves with low diet and daily purging for weeks, and yet who are no better of their gonorrhœa. An antiphlogistic course alone may relieve the more acute symptoms, but it will not cure the complaint; and so soon as the pain in passing water has diminished and the local inflammation in a measure subsided, the patient should no longer be confined to his room, and should have a more liberal diet; nor, under any circumstances, should his confinement and abstinence be continued, if, after a reasonable time, they are found to produce no change for the better, or the pulse become feeble, the skin clammy and the strength exhausted. Indeed, in some cases, in which the constitution is enfeebled by disease, debauch, or previous attacks of venereal, it is necessary to abstain from all measures calculated to lower the tone of the system, and resort to good living and even quinine, iron and other tonics, at the outset of the disease. It is, therefore, to be expressly understood that the antiphlogistic treatment here recommended, is intended to apply, in its full force, chiefly to the disease at it appears in first attacks in men of full habit. Those patients who have had numerous previous attacks will rarely require such active treatment in any stage of the disease. The judgment of the surgeon must determine the indications of each individual case.

A marked diminution of the scalding in making water, and of the painful sensations in the penis, is, I believe, a better index of a subsidence of the inflammatory action, than the character of the discharge, which, independently of treatment, often continues copious and purulent after the third stage has fairly commenced.

In giving directions as to the regimen of a patient in the third stage of gonorrhœa, some regard should be paid to his usual mode of life. As a general rule, all indulgence in spirituous or malt liquors should be strictly forbidden, and total abstinence be practised until the cure is complete, and for at least a fortnight afterward. You will meet with some patients, however, who have been free drinkers for years, and who will not well bear the total loss of their daily drams, without becoming so debilitated, that their gonorrhœa is thereby prolonged and more difficult to cure. In these *exceptional* cases, it is better to allow a glass of claret, sherry, or even brandy and water, to be taken with the dinner. In any case, malt liquors should be avoided, since they are decidedly more injurious than other liquors which contain a larger amount of alcohol. The patient may now return to a more generous but simple diet, though salt meats, highly seasoned food, asparagus and cheese should still be avoided. The bowels are not to be allowed to become constipated, and this should be prevented so far as possible by regulating the diet. One or two free stools a day are desirable. If the patient have been confined to the house during the acute stage, he may now be allowed to go out, but he should be cautioned against walking or standing more than is necessary, and the genital organs should be well supported by a suspensory bandage. Patients often inquire whether the use of tobacco is injurious. I believe that it is, and that either smoking or chewing, especially in excess, relaxes the genital organs and tends to keep up a urethral discharge. I have frequently been told by patients subject to spermatorrhœa, that smoking during the evening would invariably be followed by an emission during the night, and I am satisfied that many cases of gonorrhœa are prolonged by the excessive use of tobacco. I therefore recommend entire abstinence, or, at least, great moderation, both in smoking and chewing, to person suffering with this disease.

The chief remedies adapted to the third stage of gonorrhœa are injections, and copaiba and cubebs. By far the more important of these are injections, which constitute our chief reliance in the treatment of this affection, when it has arrived at this stage; and, in spite of all that has been written and said against them, I do not hesitate to say, that the surgeon who voluntarily renounces injections, deprives himself of his best weapon in contending with gonorrhœa, and is comparatively impotent in his attempts to conquer it.

The objections that have been raised against this mode of treatment, need not long detain us. They are chiefly the following: 1. It is asserted that the injected fluid carries before it the muco-pus within the urethra, and thus causes the disease to extend to the deeper portions of the canal. Supposing this possible in any case, it cannot take place, if the patient pass his water before injecting, as he should always be directed to do. 2. It is said that injections may excite swelled testicle and other complications of gonorrhœa. This is only possible, when they are used of too great strength or with undue violence. 3. The chief objection that has been alleged against injections is, that they are a frequent cause of strictures of the urethra. This, the opponents of injections have endeavored to prove, by showing that most persons with strictures preceded by gonorrhœa, were treated for the latter disease by injections. This is clearly a mode of reasoning, *post hoc propter hoc*, and by no means proves the ground assumed. I have heard of some one, who, to show its fallacy, instituted some inquiries among patients with stricture, as to whether they had taken flax-seed tea for their previous gonorrhœa, and was able to prove, if such reasoning be reliable, that flax-seed tea is a very fruitful source of strictures. Ricord justly states, that it is much more probable that strictures are due to the chronic inflammation, which, in cases of gonorrhœal origin, has usually preceded them for a long time, than to any influence exercised by injections. The well-known effect of chronic inflammation of a mucous membrane in producing an effusion of plastic material in the sub-mucous cellular tissue which by its contraction diminishes the calibre of the canal, is a strong argument in favor of this view. The objections to the use of injections are, I believe, founded on their abuse, or on false reasoning, and will not stand the test of examination. When properly used, they constitute the most valuable means within our reach for the cure of gonorrhœa, and are employed in the practice of all surgeons, with very few exceptions, who have had the opportunity of testing their value.

Injections are particularly adapted to the treatment of the first stage by the abortive method and to the treatment of the third stage of gonorrhœa; although, as already stated, in very many cases they may be used in a weak form, with safety and with benefit, even in the second or acute stage.

These favorable remarks on the use of injections do not, of course, imply that they will be infallibly successful in effecting a cure, nor can they be used indiscriminately under all circumstances. The existence of certain symptoms contra-indicates their employment, since, when these are present, the effect of injections is found to be injurious rather than beneficial. The contra-indication most frequently met with, is a frequent desire to pass the urine. This sometimes supervenes after injections have already been commenced, and obliges us to omit them, until this symptom has been subdued by a return to the alkalies and sedatives recommended in the acute stage. Injections, at least those composed of astringent materials, are also contra-indicated by continuous pain in the penis, and by any considerable amount of tumefaction of its tissues. Under the latter circumstances, injections of glycerin and extract of opium may still be used in many cases with advantage, as already mentioned.

The directions given as to the manner of using the syringe in the abortive treatment, suffice for the third stage, with but few modifications. A larger syringe, however, is desirable ; one holding, for instance, three or four drachms. There is now no necessity for limiting the extent of the injection posteriorly; on the contrary, the fluid should be driven as far back as possible, by passing the finger along the course of the urethra, from before backward. This manipulation may be alternated with one in the opposite direction (from behind forward); the latter being used in order to insure the application of the fluid to the whole urethral surface and its lacunæ. The patient should always pass his water before injecting, and two syringefuls should be thrown in at each application.

A great variety of substances have been recommended for the active principle of injections in gonorrhœa. A choice, to a certain extent, is doubtless desirable, because the same injection is not always found to succeed equally well in all cases, although the symptoms may apparently be the same. I have at present, a patient under my charge, whom I have treated several times before for gonorrhœa, and whose disease is always aggravated by injections of sulphate of zinc, while it improves under a weak solution of nitrate of silver. Other individual peculiarities are occasionally met with; and yet I believe that a great deal of time is often wasted by young practitioners, in ringing different changes upon the many varieties of injections which they find proposed in books, supposing that there is some specific action to be attained in the injection ; while the truth is, in most cases, that success depends upon the thoroughness of the application, and upon attention to the general health, and to any complications which may exist. If no other ingredients for injections except sulphate of zinc and nitrate of silver, were known, I believe that the therapeutics of gonorrhœa would be the gainer rather than the loser.

My own preferences for an astringent as the active principle of injections in the third stage of gonorrhœa, are very strongly in favor of the sulphate of zinc ; and this is the favorite injection of Sigmund, of Vienna, Mr. Milton, and many other eminent surgeons. I have already spoken of the addition of small quantities of this salt to the sedative injections of the acute stage, after the more inflammatory symptoms have been subdued. The quantity of the sulphate may be increased and the opiate diminished, as the case progresses, and the latter finally omitted altogether. The strength of the injection should be such that it may excite an uneasy sensation or slight pain in the urethra for about ten minutes, but it must not be strong enough to cause severe or long continued pain. As the case approaches a cure, however, the injection will cease to excite any unpleasant feeling whatever, and its strength need not be further increased. In most cases, we need not at any period exceed the proportion of the sulphate in the following formula :

℞ Zinci sulphatis, gr. xij.
Aquæ puræ ℥iv.
M.

Glycerin may be substituted for half an ounce or an ounce of the water. As to the frequency with which the injection is to be used, I usually direct the patient to inject after each passage of his urine, expecting that he will take four or five injections in the course of the twenty-four hours. It is better that the last injection in the course of the day, should be taken an hour or two before retiring, since if it be taken directly before going to bed, it favors the occurrence of erections and chordee during the night.

If the discharge do not materially diminish under the use of these injections, combined, in most cases, with the internal administration of copaiba or cubebs, I usually resort to an injection of nitrate of silver, of the strength of from two to five grains to the ounce of water, and inject it myself for the patient, every one, two, or three days, while at the same time he is directed to continue his injection of sulphate of zinc. I never leave the administration of an irritant injection, as one containing nitrate of silver, to the patient himself, since its effect should be closely watched.

We have in other salts of zinc, lead, alum, copper, etc., various substitutes for the injections now recommended, and which in a few instances may be found to be more beneficial; still, in most cases, I believe them to be far inferior, and I would again caution you against hastily changing from one form to another, and thus being led to overlook matters of still greater importance than the astringent of which the injection is composed.

Injections of chloride of zinc have been advised by several authors; but after giving them a fair trial, I can say with Mr. Milton, that I have been "completely disappointed" in them. The following are some other forms of injections, which may occasionally be useful:

℞ Liquoris aluminis comp, ℥j.
Aquæ, ℥iij.
M.

℞ Liquoris plumbi subacetatis, ℥ss–j.
Aquæ q. s. ad. ℥iv.
M.

℞ Aluminis, gr. xij.–xxx.
Aquæ, ℥iv.
M.

Mr. Milton says of alum: "The absence of pain which follows its use, and its feeble curative power, have led me to assign to it only a secondary rank. I am, indeed, extremely doubtful, if it possess any superiority over very mild injections of nitrate of silver or sulphate of zinc, and would, therefore, confine its exhibition to those cases accompanied by severe pain, where it may, during a day or two, serve as a pioneer to the others."

℞ Cupri sulphatis, gr xij.
Aquæ, ℥iv–vj.
M

℞ Zinci sulphatis,
Plumbi acetatis, aa. gr. xxx.
Aquæ rosæ, ℥vj.
M. (Ricord.)

℞ Zinci sulphatis, gr. xv.
Plumbi acetatis, gr. xxx.
Tincturæ catechu,
Vini opii, aa. ʒj,
Aquæ rosæ, ℥vj.
M. (Ricord.)

℞ Vini rubri, ℥vj.
Acidi tannici, gr. xvij.
M.

℞ Zinci sulphatis,
Acidi tannici, aa. gr. xiij.
Aquæ, ℥iv.
M.

Tannate of zinc is formed by mutual decomposition.

LECTURE V.

Treatment of Urethral Gonorrhœa in the Male, concluded: Copaiba and Cubebs—Mode of Action of—Stage of the Disease to which they are especially applicable—Formulæ for—Inconveniences of; Causes of the Persistence of Gonorrhœa in some Cases—Treatment of Chordee and other Special Symptoms.

Those drugs which have a peculiar power in arresting inflammation of the lining membrane of the urethra, are called anti-blennorrhagics; they are chiefly copaiba and cubebs. Some interesting investigations have been made by Ricord to determine the mode of action of these medicinal agents, which you will find given in detail in this author's notes to "Hunter on Venereal." It had already been observed in practice that copaiba and cubebs had but little curative effect upon gonorrhœa of any portion of the male or female genital organs except the urethra; and it was suspected that they acted chiefly by their presence in the urine and not through the general circulation, but this fact had not been demonstrated. A man with gonorrhœa chanced to enter Ricord's ward at the *Hôpital du Midi*, who had a fistulous opening communicating with the urethra a short distance in front of the scrotum, the effect of a ligature which had been applied around his penis when a child. He could at will, by separating or approximating the two edges of this fistula, either make his urine emerge from this orifice or cause it to traverse the whole extent of the urethra. Both portions of the canal were affected with gonorrhœa.

Ricord administered copaiba to this patient, and directed him to pass his water entirely through the fistula. In the course of a few days, the disease was cured in that portion of the canal, which was behind the artifical opening, and through which the urine had passed, while it remained unchanged in the anterior portion. He was now directed to make his water pass through the whole length of the canal, and in a few days more the anterior portion was also cured. By a singular coincidence, two other cases, of a similar character, soon after presented themselves in Ricord's wards, in one of which copaiba was given and in the other cubebs, and the result in each was the same as in the case just described. From these experiments, Ricord concludes that copaiba and cubebs have but little influence upon gonorrhœa, unless they be directly applied to the diseased surface, and that we cannot expect decided benefit from their administration in any form of the disease except that of the urethra in the two sexes. In gonorrhœa of the vagina or vulva, or in balanitis, they are comparatively useless. That copaiba and cubebs are really present in the urine of persons taking them, is evident from the peculiar odor which they impart to this fluid.

By these remarks, however, I would not lead you to suppose that copaiba and cubebs have no action upon the system except through the kidneys. In other diseases than those of the urinary organs, they are often used with benefit, and therefore cannot be said to be destitute of all action through the general circulation. They sometimes act also as revulsives, as when they produce copious evacuations from the bowels, and thus diminish a discharge from the urethra, in the same way that an ordinary cathartic would do ; but in both these modes, their action is much inferior to the effect which they produce through the renal secretion in the manner described.

But if copaiba act in this way, you may naturally inquire why we may not make an emulsion of it and inject it into the canal, and thus avoid administering so nauseous a drug by the mouth. This has indeed been tried in numerous instances, but the result has been very unsatisfactory. It would appear that both these drugs undergo some modification in passing through the digestive organs or the kidneys, the nature of which is unknown, but upon which their curative power depends, and no attempts to imitate this modification by art have been successful.

In some cases of vaginal gonorrhœa, Dr. Hardy, of Paris, has effected a cure by giving the patients copaiba, and then injecting the urine which they passed into the vagina ; but these experiments are more interesting than worthy of imitation in the treatment of gonorrhœa in women.

It was formerly supposed that copaiba could be used with safety only in gleet, and even then in very small doses, and that it was inadmissible in gonorrhœa, especially in its acute stage, being liable, as was thought, to excite inflammation of the neck of the bladder and swelled testicle. In the latter part of the last century, however, it was discovered that the natives of South America were in the habit of administering copaiba in large doses in all stages of gonorrhœa, and this too with very great success. This knowledge led to a bolder method of administering it, and it was soon ascertained that its curative effect is much greater in the acute than in the chronic form of urethritis, and that it is rarely, if ever, productive of those complications which were once attributed to it.* In short, it would appear that copaiba can be administered with safety and to much greater advantage in the acute stage of gonorrhœa, or at an early period of the stage of decline, than afterward, and the same is true of cubebs. Still, when a case of this disease presents itself with marked inflammatory symptoms, it is usual to wait for a day or two until these have been somewhat subdued, by the means already mentioned, before commencing with copaiba or cubebs, and I do not think that any time is thus lost; and, in all cases, the effect of the remedy is promoted by the previous exhibition of a cathartic. The diuretics and alkalies, spoken of in connection with the acute stage, may be combined with these drugs, as in some of the formulæ to be mentioned presently, or may be given separately.

The dose of copaiba is from twenty minims to one or even two drachms, repeated three times a day. It may be given in its pure state upon a little coffee, wine, or milk, but it is so disagreeable to the palate, and so likely to excite nausea, eructations, and even vomiting, that few persons can tolerate it when given in this manner. To render it more acceptable to the taste and stomach, it is generally given in combination; and other ingredients are often added for the purpose of assisting its action upon the urethra. A very common and excellent formula is the following, which is known as the Lafayette mixture:

℞. Copaibæ,
Spiriti ætheris nitrici, aa. ℥j.
Liquoris potassæ, ʒj.
Spiriti lavandulæ comp., ʒj.
Syrupi acaciæ, ℥vi.
M.

Dose—*From a teaspoonful to a tablespoonful after each meal.*

The following formulæ are also recommended:

℞. Copaibæ,
Liquoris potassæ, aa. ʒiij.
Mucilaginis acaciæ, ℥j
Aquæ menthæ viridis, q. s. ad ℥vj.
M. (Milton.)

Dose—*One ounce three times a day.*

℞. Copaibæ, ʒx.
Tincturæ cantharidis,
Tincturæ ferri chloridi, aa. ʒij.
M.

Dose—*From half a teaspoonful to a teaspoonful in some vehicle.*

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* For an interesting history of the remarkable change in medical opinion with regard to the administration of copaiba, see Trousseau's "Traité de Thérapeutique," vol. ii., p. 592.

But, in whatever way copaiba may be combined, many stomachs will not support it, in a liquid form; hence I commonly prescribe the solidified mass, formed by the addition of magnesia, and known in the U. S. Dispensatory as Pilulæ Copaibæ. It requires some little tact to prepare this mass; or, rather, difficulty is met with unless the proper kind of copaiba be used. Two kinds are found in commerce, one of which, the best, is solidifiable with magnesia, and the other not. The solidified mass should be divided into pills, each of which may contain five grains; and it is desirable that these should be coated with sugar, both for the purpose of preventing their adhering together, and to render them more acceptable to the palate. This is to be accomplished in the following manner: Put the pills into a vessel with sufficient water to moisten them; then turn them out upon a pan and sprinkle over them finely powdered sugar, at the same time rolling them about by shaking the pan, so that they may be entirely and equally coated. This process may be repeated after they are dry, as many times as is necessary to give them a thick coating of sugar. The dose of these pills is from four to eight three times a day. Thus prepared, they leave no taste in the mouth, and, being slowly dissolved in the stomach, are much less likely to excite nausea than the liquid copaiba.

We have another anti-blennorrhagic, but little if at all inferior to copaiba, in the powdered berries of the Piper Cubebæ. Cubebs possess the advantage over copaiba of being far less disagreeable to the taste, and less likely to excite nausea, eructations, vomiting, and diarrhœa; and, on this account, are often to be preferred in the treatment of gonorrhœa. They cannot be relied upon, however, unless freshly powdered, and preserved in a glass vessel; since the essential oil which they contain is rapidly absorbed by any porous material. Cubebs are conveniently taken by mixing from one to two drachms of the powder in half a glass of sweetened water. The dose should be repeated three or four times a day.

Cubebs are often advantageously combined with iron, especially for persons of weak habit, thus:

℞ Pulveris cubebæ, ʒij.
Ferri carbonatis, ʒss.
M. et ft. pulv.

To be taken three times a day.

Cubebs and copaiba may be combined together in the same prescription.

℞ Copaibæ, ℥ij.
Pulveris cubebæ, ℥j.
Aluminis, ʒiss.
Magnesiæ, q. s. ut fiat massa.

To be divided into pills containing five grains each, of which from four to eight are to be taken three times a day.

℞ Pulveris cubebæ, ℥iij.
Copaibæ, ℥iss.
Aluminis, ʒij.
Sacchari albi, ℥j.
Magnesia, ʒiss.
Olei cubebæ,
Olei gaultheriæ, aa. ʒj.
M.

This mixture forms a paste, of which the patient may be directed to take a piece the size of a walnut, after each meal. The following prescription is particularly adapted to delicate stomachs :

℞ Copaibæ, ℥ij.
Magnesiæ, ʒj.
Olei menthæ piperitæ, gtt. xx.
Pulveris cubebæ,
Bismuthi subnitratis, aa. ℥ij.
M.

To be divided into pills of five grains each, and coated with sugar.

℞ Copaibæ, ℥iv.
Magnesiæ, ʒij.
Pulveris cubebæ, ℥vj.
Ammoniæ carbonatis, ℥j.
Ferri sulphatis, ℈iv.
M. (Méot.)

To be divided into 1088 *pills : dose, three, three times a day.*—

Copaiba and cubebs may also be obtained enveloped in capsules of gelatin, and this is a popular form of taking them. I am not, however, partial to these preparations. The capsules do indeed obviate the disagreeable taste of these drugs, but they do not prevent nausea and eructations, when their contents are suddenly discharged into the stomach, by the solution of the envelope. I very much prefer to the capsules, the French *dragées* which have been introduced within the last few years. There are several varieties of them ; some containing copaiba alone, others cubebs, and others still both these drugs combined with iron ; and I have found them all to be very reliable. The dose is from four to six, three times a day. In my own practice, I usually prescribe these *dragées*, or one of the above formulæ for pills of the solidified copaiba with cubebs, or simple cubebs in powder. I am also in the habit of prescribing some form of iron, either alone or in combination with the anti-blennorrhagics, in the majority of cases, after the more acute symptoms have passed.

Injections of an emulsion of copaiba into the rectum, in cases where it is not borne by the stomach, have been recommended, especially by Velpeau. I have never tried this method of administering copaiba, and should have but little faith in its efficacy. It is acknowledged that a much larger quantity must be used than when it is given by the mouth.

A simple injection should first be employed to clear the rectum of fecal matter, when the following mixture may be thrown in :

℞ Copaibæ, ʒv.
Ovi vitelli No. j.
Extracti opii, gr. j.
Aquæ, ℥viss.
M.

The nausea, eructations, and diarrhœa, which are often excited by copaiba, have already been referred to, and these sometimes render it impossible to administer this remedy in any form to a delicate stomach. The diarrhœa may often be controlled by the combination of alum or an opiate, but more frequently requires the drug to be suspended, and afterward resumed in smaller doses.

Copaiba sometimes, also, gives rise to a cutaneous eruption, belonging to the class of exanthemata, as roseola, erythema, or urticaria. Such eruptions should be carefully distinguished from those of secondary syphilis, which may readily be done by the absence of any induration of the inguinal ganglia, by the itching that usually attends them, and by their disappearance in a few days after the copaiba is suspended. The administration of copaiba should never be continued, if it produce this effect.

Another unpleasant symptom not unfrequently produced by copaiba, is pain in the region of the kidneys, dependent upon congestion of those organs. A few years ago, a patient was under my care for gonorrhœa, who had previously had several attacks of hæmaturia. Contrary to my advice, he took some capsules of copaiba, which induced a return of the blood in his urine, and I afterward learned that the administration of copaiba had already produced a similar effect in a former attack of gonorrhœa which he had had. I always consider the presence of this pain as an indication that the copaiba should be omitted, for we have no right, in these days when renal disease is so common, and a healthy kidney so rarely met with at a post-mortem examination, to subject our patients to the risk of permanent injury.

Cubebs may give rise to any of the unpleasant symptoms just mentioned, as likely to occur from copaiba, though much more rarely. Both of these drugs, in large doses, will, in rare instances, excite severe headache, giddiness, and even more serious symptoms connected with the nervous centres. Ricord mentions a case of temporary hemiplegia, and another of violent convulsions, produced by copaiba ; and, in both instances, these serious symptoms were followed by the outbreak of a cutaneous eruption, also dependent on the drug.

The anti-blennorrhagics now mentioned, are of undoubted efficacy in the treatment of many cases of gonorrhœa, but in other cases they utterly fail; nor have we any means of distinguishing these two classes of cases from each other beforehand. As I have already stated, I think they hold a second rank to injections in the cure of this disease. As a general rule, if they are likely to prove successful, their good effect will be apparent in a fortnight or three weeks from their commencement, and if, by this time, the disease continue unabated, they should be omitted and other means be resorted to, to effect a cure. When long continued, they produce disorder of the digestive functions, impair the appetite, and induce general malaise and debility; a condition of the system highly calculated to prolong the duration of gonorrhœa. Though of marked benefit in very many cases, they are by no means indispensable in the treatment of every case of gonorrhœa.

A mistake, generally committed by patients who treat themselves for gonorrhœa, and by some physicians, especially in the early years of their practice, is over-medication and a neglect of the general health. Nothing is more common than to meet with a patient, suffering from gonorrhœa of several months' standing, who has been kept on low diet, and been taking various preparations of copaiba and cubebs, using a variety of injections often exceedingly irritant in their composition or strength, and who is now run down, weak in body and despairing in mind. His digestion is impaired, his appetite gone, and his clap as bad as ever. Let such a man lay aside his capsules, pills, powders, mixtures and irritant injections; give him substantial food, and a tonic, as quinine or iron ; limit the special treatment of his disease to a weak astringent injection, as from one to three grains of sulphate of zinc to the ounce of water, and his disease will probably begin to improve at once, and get well in the course of a few days or weeks. Under any circumstances, you will have removed one great obstacle to a cure, and if the discharge do not entirely disappear, it is probably kept up by some local complication, which can now be attacked with the prospect of success. The following is a type of this class of cases.

P. A., aged 19, applied to me on May 5th, 1857, for a gonorrhœa which he contracted about the middle of January. He had been under the care of several physicians, and had treated himself a portion of the time ; had taken copaiba in almost every form, and cubebs in large quantities ; and had used strong injections of nitrate of silver, sulphate of zinc, alum and acetate of lead. He was now much debilitated, and complained of general malaise and loss of appetite, and the discharge was still copious. I passed a bougie upon him, to ascertain if he had any stricture, but could discover none. I then directed him to abstain from all anti-blennorrhagics and to live well, and prescribed five grains of citrate of quinine and iron to be taken with each meal, and an injection of sulphate of zinc, three grains to the ounce.

In one week from the time I first saw him, the discharge had disappeared. There was a slight return of it a few days afterward, but this lasted only for a day or two, and did not again appear.

In the large class of cases of which this is a type, the disease is kept up by a debilitated condition of the system, and requires for its removal general hygienic measures, and in most cases tonics. I have found the citrate of iron and quinine, and the tincture of the chloride of iron, most serviceable.

Independently of debility, the chief causes of the continuance of a gonorrhœal discharge are the existence of a stricture and irritation of the neck of the bladder. It is desirable in every obstinate case to ascertain if the former be present by the passage of a full-sized bougie, and if any obstruction be met with, appropriate treatment should at once be adopted.

It sometimes happens that a case of gonorrhœa has been going on well for a week or ten days under the use of the anti-blennorrhagics and injections—the discharge has almost entirely ceased and the patient considers himself nearly well, when suddenly a relapse takes place; the discharge is once more thick and purulent, the scalding in making water returns, the injection, which has scarcely been felt for a number of days, excites considerable pain, and at the same time the patient has a very frequent desire to pass his urine, and suffers from an uneasy sensation in the perineal region. The latter symptoms denote that the disease has extended to the deeper portion of the urethra, and that there is irritation or inflammation of the neck of the bladder. Under these circumstances, the case requires to be very carefully watched and judiciously treated. Unless great care be used, the inflammation may extend through the vas deferens to the scrotal organs on one side, and swelled testicle ensue. If irritant injections now be used, they will not only be found to be of no benefit, but will aggravate the symptoms. It is best to suspend the use of injections altogether, and to resort to the exhibition of alkalies and sedatives, as recommended in the inflammatory stage, until the subsidence of the symptoms shall enable us to resume direct treatment; the patient should also be particularly careful with regard to exercise. Canada turpentine, the product of the *Abies Balsamea*, will also be found of essential service in these cases, in place of the anti-blennorrhagics, which should be omitted. It may be made into pills containing five grains each, of which from six to twelve should be taken daily. Still another remedy of value is blistering the penis or perineum, in the manner which I shall describe in my next lecture, in connection with gleet.

It remains to speak of the treatment of some special symptoms which may attend a case of gonorrhœa, and one of the most annoying of which is chordee. Various sedatives are employed for the relief of this symptom, among which camphor holds the first rank. This may be given in the form of a pill, combined with extract of lettuce or opium, as in the following formulæ:

℞ Lactuarii,
Pulveris camphoræ, aa. ℈ij.
M. ft. pil. No. xx.
Dose—Two at bedtime.
(Ricord.)

℞ Pulveris camphoræ, ℈iss.
Pulveris opii, gr. x.
M. ft. pil. No. x.
Dose—One or two.
(Ricord.)

Mr. Milton prefers to administer camphor in a liquid form in large doses. He directs the patient to take one drachm of the tincture in water on going to bed, and every time he wakes up with chordee, to repeat the dose. He states that after the continuance of this treatment for two or three nights all tendency to chordee disappears.

Lupulin is another remedy of undoubted power in allaying the excitability of the genital organs, and possesses the advantage over opium that it does not constipate the bowels. It is best given in doses of fifteen grains, triturated in a mortar with sugar. This powder is to be taken before going to bed, and may be repeated one or more times in the night if required.

Of the above means of relieving chordee, I regard Mr. Milton's method of giving camphor, if it do not disagree with the stomach, and the administration of lupuline, as the best ; yet none of the remedies mentioned can be relied upon with certainty of producing the desired effect, for they all fail in many instances. Much may be accomplished by directing the patient to avoid eating or drinking for some hours before going to bed, to be careful to empty his bladder and rectum, and to sleep on a hard mattress, with but few bedclothes over him. I have sometimes directed a suppository of hyoscyamus and belladonna to be introduced into the rectum with good effect.

Another means of relief which I have found highly successful is bathing the genital organs in very hot water directly before going to bed. The reaction after the application of heat has a sedative effect, and in this respect has exactly an opposite influence to that of the cold lotions which are sometimes advised.

Hemorrhages from the urethra, occurring during erections, if slight, require no treatment. When copious, however, they are to be arrested by quiet, the horizontal posture, the application of ice externally, and the injection of ice-water into the canal; and severe cases may require that compression should be effected by the introduction of a bougie and a bandage around the penis, or a compress to the perineum.

If abscesses form along the course of the urethra, they should be opened at an early period, for fear that they may ulcerate both externally and internally, and thus give rise to urinary fistulæ.

As an attack of gonorrhœa is passing off, it not unfrequently happens that the discharge assumes an intermittent character, entirely disappearing for a few days, and then, without apparent cause, reappearing for a day or two. This may be repeated several times in succession, and in some cases that I have witnessed, it has assumed great regularity. The surgeon should, of course, assure himself that these symptoms are not due to any imprudence, and, if satisfied of this, is generally safe in telling the patient that these are the last gasps of his enemy, who will soon cease entirely to annoy him.

It is important to continue treatment for some days after all traces of the disease have passed away, since relapses very readily occur. They are usually brought on by the patient's neglecting the rules with regard to exercise, diet, etc., already laid down, or by his indulging in sexual intercourse. He should be particularly cautioned on these points, and should be directed to continue his medication, both external and internal, in decreasing doses, for at least ten days after the lips of the meatus have ceased to be glued together in the morning. Until this final symptom of gonorrhœa has disappeared for this length of time, the patient cannot consider himself as securely well, and even then he should be cautious in his habits for a fortnight longer.

You may be interested to know what average duration of treatment is required, in the hands of the best surgeons, for the cure of gonorrhœa, laying aside those cases which are seen in the first stage, and which are speedily cured by the abortive method. This may be estimated at three or four weeks. Greater success than this, on the average, is probably not to be attained by any means with which we are at present acquainted.

DISEASES OF CHILDREN.

A Course of Lectures Delivered at the College of Physicians and Surgeons, in the Spring Course, 1859.

By A. JACOBI, M.D.
PHYSICIAN TO THE CHILDREN'S DEPARTMENT OF THE CANAL STREET (GERMAN) DISPENSARY.

Lecture I.

On the Catarrh of the Infantile Larynx.

The causes of laryngeal catarrh are very various. Inhalation of cold air, of dust, over-exertion of the voice, entrance of a hot liquid into the larynx; cold of the external surface of the body, and particularly of the feet and neck; progress of the catarrhal process of the nose or bronchi, and sometimes even of the pharynx, on the laryngeal mucous membrane; and finally, certain diseases attended with decomposition of the blood, as measles, and sometimes scarlatina, are amongst the causes of laryngeal catarrh in children.

The anatomical lesions found in individuals who have died while affected with catarrh of the larynx, do not always correspond with the symptoms during life. The mucous membrane of the larynx is so full of elastic fibres, that after death the blood is squeezed out of the capillaries. In very severe catarrhs, small apoplexies, or sugillations, occur occasionally, and are visible even after death. On the mucous membrane there is none of the normal vibratile cylinder epithelium which forms the upper layer of the epithelium in the larynx. The mucous membrane is moist, succulent, loose; the sub-mucous tissue is seldom œdematous, but sometimes, even in quite an acute laryngeal catarrh, small catarrhal ulcerations have been found. Thus the anatomical lesions left in the mucous membrane of the larynx after death fully correspond with those found in the mucous membranes of other organs. Sometimes the vestiges of catarrh are clear and distinct, sometimes nothing is found in post-mortem examinations. An example of this fact is the occasional absence of any post-mortem results in children who have died in a severe attack of cholera infantum. While in some all the signs of catarrh, from simple hyperæmia to ulcerations of the follicles, are discovered, in other cases no alteration at all is found.

In chronic catarrh the mucous membrane appears darker, livid, or brownish. The blood-vessels are varicose and full of blood, and numerous enlarged follicular glands have been found in the mucous membrane, which is covered with a yellowish purulent secretion. As consecutive stages of the catarrhal process we may mention chronic catarrhal ulcers, polypous granulations, and thickening and induration of the submucous tissue.

The acute catarrh of the larynx is seldom, from the beginning, a feverish disease. The patients feel comfortable, and the functions of the diseased organ are alone abnormal. There is a certain degree of sensibility in the region of the larynx, a burning or itching sensation. The voice is altered, becoming indistinct and hoarse, in consequence of the thickening of the margins of the vocal chords, which the muscles are no longer able to force into as many vibrations as before. Besides the itching and burning sensation, and hoarseness, there is another symptom present—viz., severe cough, occurring in paroxysms, as if produced by some foreign body touching the mucous membrane of the larynx. Expectoration is not copious; in the commencement of the disease there is none, or it is clear and serous, containing some few cylindrical epithelia, and a few from the lower layers. In the other stages of the disease, particularly in the course of recovery, the expectoration becomes more consistent, more purulent, and yellowish. Older children only will remove at all the expectorated masses; children generally swallow whatever touches their fauces, and it is sometimes very difficult indeed to obtain any information as to the nature of their expectorations. Physical exploration of the larynx gives no result, or very little indeed. Sight alone is of some use, as a few remarks will illustrate:

Some five years ago (in 1854), after having attended a young man suffering from secondary syphilitic symptoms, I was much troubled by my patient's continual complaint of his larynx. In order to examine his larynx by sight, I had this instrument made. It is, as you see, a small oval mirror, in a wooden frame, and with a flexible handle, which, when applied to the soft palate and uvula, renders, after some exercise, the insight into the larynx possible. The laryngeal mucous membrane was healthy, and has proved to be so for five years. As I seldom afterward used my instrument, and as I, indeed, never thought of rendering it profitable in other cases, and to the profession generally, I certainly do not pretend to have any priority regarding this invention. Dr. Manuel Garcia has published a series of observations and experiments on the examination of the larynx by sight, in the "Philosophical Magazine and Journal of Science," vol. x., July to December, 1855. London: "The method which he has adopted consists in placing a little mirror, fixed on a long handle suitably bent, in the throat of the person experimented on, against the soft palate and uvula. The party ought to turn himself toward the sun, so that the luminous rays falling on the little mirror may be reflected on the larynx. If the observer experiments on himself, he ought, by means of a second mirror, to receive the rays of the sun, and direct them on the mirror which is placed against the uvula." Dr. Garcia was followed by Professor Brücke, in 1856, Dr. Türck, in 1857, and Professor Czermak, in 1858,* by whose experiments a great number of questions regarding the physiology of the larynx have been answered. For it is not only possible to see clearly the basis of the tongue, the margin of the epiglottis, the arytenoid cartilages, the posterior two-thirds of the vocal chords, Morgagni's fossæ, and a portion of the mucous membrane of the trachea, but a large part of the posterior (or inferior) surface of the epiglottis, and sometimes even the bifurcation of the trachea. As to the best method of examining the larynx by means of the mirror (or *laryngoscope*), it is more profitable to use reflected light, which can always be brought to a single point you are about to examine. The reflector before you is nearly plain, has a radius of about 1½ inches, and is fixed to the forehead by means of a turning nut-joint, and an elastic strap encircling the head. This apparatus, as modified by Dr. E. Krackowizer, of this city, is preferable to the one used by the savans of Vienna, which is perforated in its centre, and applied directly to the eye.

There is no doubt that the diagnosis of severe laryngeal affections is greatly facilitated by the apparatus now before you, no matter whether the laryngoscope is made of glass, like my old one, and Dr. Garcia's, or of German silver, as those now generally used in Vienna, and by me also.

The sub-mucous tissue is much swollen in some exceptional cases only, as far as adult persons are concerned. For the glottis, and particularly its posterior third, forms a pretty large opening in adults, and the entrance of air into the respiratory organs is not prevented by the tumefaction of the mucous membrane. Even children do not suffer very often from dyspnœa, in consequence of simple laryngeal catarrh. Although in them the glottis is short and narrow, the swollen chordæ vocales, by means of the constant and uninterrupted action of the posterior crico-arytenoid muscles, are sufficiently distant from each other not to prevent the entrance of air. But sometimes children, who have been coughing and hoarse during the day, without feeling sick, will be observed to awake suddenly in the night, with an attack of suffocation. Inspiration is extremely difficult and exhausting ; in the utmost height of their anxiety and trouble, the children will roll about, jump upon their knees and feet, and grasp their throat ; their cough is hoarse, rough, and, as it were, barking. These attacks have been, and are very often mistaken for croup, have been and are described as pseudo-croup, false croup, and usually disappear without leaving a trace, after a duration of one or a few hours. These are the attacks which readily disappear after the administration of hot milk, by putting hot sponges over neck and throat, and by emetics, and which have won for these remedies the reputation of being infallible in croup, when given in time.

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* "Wien. Med. Wochenschr." 1858. Nos. 13–16. "Sitzungsberichte der Mathem. Naturw. Classe der Kais. Akad. d. Wissensch. zu Wien." 1858. Vol. xxix., No. 12, page 557. "Physiologische Untersuchungen mit Garcia's Kehlkopfspiegel." Wien, 1858. Pp. 30, and 3 plates.

Physicians who are better business men than diagnosticians, and more shrewd than honest, will readily support, by the weight of their words, the opinion of the parents that the child has been suffering from croup, and was saved from a speedy death. You may be certain that all the children who are reported to have suffered from croup four, six, and twelve times, and have always been saved, were simply suffering from attacks similar to those of which I have just been speaking. Perhaps the sudden attacks of suffocation are produced by a momentary swelling of the mucous membrane and narrowing of the glottis, which the muscular action could not counteract, as sometimes a nostril is thoroughly impermeable in consequence of a severe cold. Perhaps even a reflected action is produced by the irritation of the mucous membrane and spasm of the glottis affected. But it is better explained in the following manner : The suffocative attacks almost always occur in the course of the night ; they diminish and disappear, after the child has been awake for a time, with screaming, coughing, and vomiting ; and will appear anew after the patient has again fallen asleep. From this fact it is probable that the cause of the sudden suffocative attacks is due to the exsiccation of a collection of tough secretion in the larynx and glottis. At all events, the quick operation of the above-mentioned remedies is best explained in this manner. Such attacks will not unfrequently return, the children playing around all day, and appearing to be perfectly healthy, except a slight hoarseness.

As to the course, duration, and termination of the disease, it may be added that usually after a few days the larynx ceases to be as sensitive, the cough subsides, the hoarseness vanishes, and the disease terminates in recovery, after a week or two. But a duration of several weeks is not uncommon, and do not forget that the infantile organism has a great tendency to inflammatory affections, and to the exudative processes, and that the infantile vocal chords will not bear so well, as those of adults, a thickening of their substance and a considerable narrowing of the rima glottidis. The patient may be apparently well during the day but troubled by attacks of coughing every morning and night, and this state of things may last for a long time, until the catarrh and its consequences have become chronic, and removable only with difficulty. But more serious consequences may follow the slightest dyspnœa continuing for a long time, a smaller amount of oxygen enters the blood than is necessary for the combustion of matter, and for a complete and regular physiological metamorphosis of the organism: This is undoubtedly proved by the assertions even of adult patients suffering from slight laryngeal catarrh, who will also experience suffocative attacks, and surprise you by showing a mass of mucus brought up after long coughing, dry, hard, sometimes slightly tinged with blood, and exactly bearing the outlines of Morgagni's fossæ between the superior and inferior vocal chords, or some other part of the larynx.

In chronic laryngeal catarrh, the larynx is seldom sensitive ; there is no longer any burning, itching, or sore feeling. But in consequence of the hypertrophy of the mucous membrane and the thickening of the vocal chords, there is constant alteration of the voice, which is rough, and hoarse. This chronic hoarseness is sometimes the only sign of chronic laryngeal catarrh, and wherever it is the only complaint, or symptom, it is pathognomonic and renders the diagnosis easy. Every intercurrent, acute irritation of the laryngeal mucous membrane will thicken the vocal chords to such a degree as to render vibrations totally or nearly impossible, and deprive the patients, temporarily, but entirely, of the voice. At the same time, also, a spasmodic cough is observed, as in acute catarrh. But whenever, in cases of laryngeal catarrh, you meet with a sibilant sound in inspiration or expiration, you may be sure that you will have to deal with a complication of a serious nature. It may be that there are exudations of the sub-mucous tissue of such an amount as to render the glottis exceedingly narrow, and to produce the sibilation in inspiration and expiration, and the vocal chords becoming stiff and immovable in consequence of this degeneration, even perpetual extinction of the voice. But generally this symptom of sibilant inspiration and expiration, together with some others, as night-sweats, general decline, will necessarily direct your attention to some not suspected pulmonary affection, and very generally tuberculosis. I may be allowed to lay this stress on a fact not strictly belonging to our subject, but you will meet with physicians of this and neighboring cities, who either wholly, or for the most part, deny the occurrence of pulmonary tuberculosis in infants and children. But I can assure you, who enter upon a large practice in our climate, that you will have frequent occasions to see cases of tubercles in the lungs of children, perhaps every week.

Catarrhal ulceration, produced by catarrh of the larynx, is not very often found in children; but it may be present where it cannot be detected, because children are very unwilling to have the throat closely examined. In an intelligent little girl I could readily detect it by means of the laryngoscope, which I have exhibited to you. Follicular ulcers may be supposed to exist in the larynx, when there are a large number of them in the pharynx, and when difficulty of deglutition begins to accompany the chronic catarrh of the larynx. The therapeutical results obtained by our countryman, Dr. Horace Green, in this very disease, as far as it occurs in adults, are well known to you, as they have given this physician a well-deserved reputation, as well in Europe as in our own country. The diagnosis of both acute and chronic catarrh is not at all difficult in the majority of cases; the laryngeal affection alters the voice itself in such a manner as to render it indistinct and hoarse, while in nasal and pharyngeal catarrh the resonance of the voice only is affected. Frequently, however, acute catarrh of the larynx is mistaken for croupous inflammation. Whenever a child is hoarse and has a barking cough, mothers are always afraid of the presence of croup, although there be no other symptom of this much-dreaded disease; and particularly in cases where the above-mentioned nightly attacks of suffocation make their appearance. On this point I feel satisfied with merely adding a single remark, with reference to symptoms; whenever there is difficulty in diagnosticating between acute catarrh of the larynx and croup, you may be almost sure of the catarrhal nature of the case when but a slight trace of nasal catarrh is observed at the same time, provided that a diphtheritic discharge from the nostrils is not mistaken for the catarrhal secretion of the mucous membrane.

After all, laryngeal catarrh is seldom a dangerous disease, and fatal cases will always be rare occurrences; but consecutive troubles, as thickening of the mucous membrane, and of the vocal chords, and narrowness of the rima glottidis, may lead to serious trouble. Polypi, and papillary tumors may even destroy patients, instantaneously, by suddenly occluding the rima glottidis. It is important, therefore, to attend to prophylactic and therapeutic measures.

In general, it is better to accustom healthy children to the causes of laryngeal catarrh than to guard them too cautiously. If they have been affected before, they must be dressed according to the temperature of the atmosphere, be exposed to fresh air, and accustomed to cold washing, to river or sea baths. Such will be the most efficient preventives. Common cases of acute laryngeal catarrh, produced by atmospheric influences, require warm foot-baths and slight diaphoretics, such as tea of elder or lime-tree flowers, or tartar emetic in small doses, or the hydropathic application of a cold, wet cloth, covered with flannel, round the neck. Wherever a complication is found of pharyngeal with laryngeal catarrh, astringent gargles with, or applications of, tannic acid, or alum, or even nitrate of silver, will prove useful. No blood-letting, however, either local or general, will be of any use. Fatty food is injurious, while sour or acid liquids are useful. The temperature of the sick-room is to be mild and equal, and every exertion of the larynx, speaking, crying, coughing, must be avoided as much as possible. For the purpose of suppressing the irritation of the laryngeal mucous membrane, the best remedy will be found in the internal administration of narcotics. It is true, that narcotics, like opium, are generally said not to be well tolerated by the infantile organism, and there are a sufficient number of cases reported in the journals to show that even a slight dose of narcotic may be an overdose to an infant. But you will always find a slight dose of Dover's powder, repeated several times a day, to exhibit a favorable effect in soothing the irritability of the catarrhal mucous membrane of the larynx, and in suppressing or at least diminishing the trouble of, and the danger from, continued coughing.

And now, gentlemen, allow me to avail myself of this occasion for adding some remarks on the doses of narcotics that may be administered to patients of infantile age. The skepticism of our time has a great tendency to do away with our therapeutical agents, even with the materia medica. You will often be told that there is no relying on medicines, that for the most part it will matter little what you do, that the longer you practise the more indifferent you will become to the materia medica; in a word, that the effects of medicines are uncertain. This incredulity in regard to our therapeutics is wide-spread in our time, and must be considered as one of the causes of the reign of nostrums and quackeries of every kind. I dare not take your time to explain this fact, but shall only express my firm conviction, that the older and more experienced we become, the more confidence we shall have in the unvarying effects of medicines, in spite of what has been said to the contrary.

The cause of all this skepticism is found in the absence of both an exact and a distinct diagnosis, and of strict indications in the use of medicines. We shall always learn, that wherever a medicine is really indicated, a good effect will always follow a good dose, in such a manner that this one principle, *Few medicines, simple prescriptions, and large doses*, will find its full justification. The following case proves this assertion ; a boy, two years and two months of age, whom I have been attending for extensive ulceration of the colon, has taken for three weeks, and digested, and assimilated, nine grains of opium, in liquid form, every day. Thus it appears, that, with the exception of individual idiosyncrasies, no medicament, especially no narcotic, is to be feared when a real indication is fulfilled by its administration ; the much dreaded opium will lose all of its supposed danger, and a dose of Dover's powder, as recommended above, in acute laryngeal catarrh, may be given with perfect safety.

In chronic laryngeal catarrh, Plummer's composition of calomel and the oxysulphuret of antimony, joined to a dose of extr. hyosc., extr. bellad. etc., has been in use for a long time. The dose of the oxysulphuret of antimony being very small, and calomel being not at all indicated in catarrhal affections of the mucous membrane of the respiratory organs, the good effect, if any there was, has undoubtedly been due to the narcotic. Powerful derivatives, as application of croton oil, or croton oil mixed with turpentine, rubbed into the skin over the diseased part, will answer in a large number of cases. So will, in very severe cases, direct local applications to the diseased parts, either of solutions of nitrate of silver, alum, etc., by means of a sponge, or of the same remedies in solid form, or of the powdered drug, if any intelligent little patient can be found to inhale it through a quill. Blood-letting is unnecessary, even in the frightful attacks of suffocation. A sudden irritation of the skin by means of hot water, or mustard, and more than anything else, the administration of an emetic consisting of tartar emetic and ipecac., will remove the attack. After a suffocative attack, do not allow the child to sleep for a long time, nor soundly ; better arouse it from time to time and offer some water in order to prevent the mucus from drying up in the pharynx and remaining too long in the larynx. Even such children as are subject to periodical attacks, ought to be aroused from time to time every night, to remove, or at least liquefy the mucus of the pharyngeal membrane.

There are two other remedies on which I wish to make some special remarks, because they have been unaccountably overlooked except in a small portion of Europe ; I mean the hydrochlorate of ammonia, or better, chloride of ammonium, and of the oxysulphuret of antimony. The Dispensatory of the United States (Eleventh ed. p. 91) mentions the resolvent, anti-neuralgic, anti-rheumatic effects of the hydrochlorate of ammonia, and scarcely touches the results obtained by a French savan in chronic bronchitis. I have no high opinion of other effects of this medicine but those referable to the mucous membrane, particularly those of the respiratory organs. Its effects on the mucous membrane of the stomach and intestines are far inferior to those which may be obtained by a judicious use of emetics, alkalies, and acids (especially the bicarbonate of soda, and the diluted muriatic and the nitro-muriatic acid). But its effects on the mucous membrane of the larynx, trachea, and bronchia are inferior to none. They are wanted not only in simple catarrhal affections of the respiratory organs, but wherever there are accidental troubles of the bronchial or pulmonary functions in typhus, acute exanthems, and intermittent fever, in short, wherever it is necessary to facilitate and finally to lessen the mucous secretion and expectoration. Therefore it is indicated in bronchitis, pneumonia, pulmonary tuberculosis, etc.

Similar indications have been set forth by me at a former occasion, for the use of the oxysulphuret of antimony. But it cannot be urged too strenuously that certain distinct indications will always limit the use of the two expectorants. Whoever would contend against the fever of the first onset of pneumonia, or acute bronchitis, with one of the two, would soon become aware of his mistake. Their operation is only to liquefy and facilitate the secretions of the respiratory organs. For this very reason their adaptedness in catarrhal affections of the larynx is readily understood and justified.

The dose of the hydrochlorate of ammonia, in infantile age, is from ℈j–ʒj a day. The simplest manner of prescribing it is to dissolve equal parts of the medicament and extr. glycyrrh. in water. Narcotic extracts, or whatever appears to be indicated, may be added to the mixture, or the medicament may be heated over a slow fire and, evaporating, inhaled by the patient, either directly or by filling the room with the vapors of the salt. The oxysulphuret of antimony is given daily, according to the age, in from 4 to 8 doses of gr. ss-j-ij-iij, each, in powder or mixture. Diarrhœa, wherever it is present, contra-indicates its administration, as in this case there is a great tendency to increase the intestinal catarrh.

Now, gentlemen, as I have given like indications for the use of both the hydrochlorate of ammonia and the oxysulphuret of antimony, you will naturally ask whether there is no difference at all in their effects, and whether those remedies may be prescribed at random. First, the oxysulphuret is an antimonial preparation, and, like the others, sedative and depressing; the hydrochlorate of ammonia is a stimulant. To a feeble child suffering from pneumonia, or bronchitis, whom you expect very soon will require strong stimulants to keep him alive, you would give no antimonials; and in the case of a robust, strong boy, whom it will do rather good than harm to be lowered for a while in order to avoid a new attack of the inflammatory fever, you will prefer an antimonial to a stimulant. Again, by the decomposition of blood accompanying the majority of epidemic diseases, the constitution of almost every individual is shaken, and the depressing and enfeebling influence of antimonials is to be feared; then an expectorant ought to be a stimulant from the first. During this last epidemic of diphtherite, there were but very few cases in which the expectorant effects of the oxysulphuret of antimony could be put to trial.

CLINICAL REPORTS.

PRACTICE OF NEW YORK HOSPITAL.

Reported for the New York Journal of Medicine,

BY GEORGE F. SHRADY, M.D.

LATE RESIDENT SURGEON.

Hospital gangrene.—During the past two or three months hospital gangrene has prevailed to a greater or less extent in this institution. The type of the disease was mild. Notwithstanding the local symptoms were well marked, there was little if any constitutional disturbance manifest, and only in a few exceptional cases was any general treatment required.

It first made its appearance in the south building, in a ward where a considerable number of suppurating sores were congregated, and soon spread from floor to floor, until at one time nearly every granulating surface in the whole division was the seat of the characteristic slough.

The cause of the appearance of the disease is referred to the fact that, for a considerable length of time before, the walls had not been washed. Everything else had, as usual, been attended to, so far as related to perfect ventilation and cleanliness. I must be permitted to say here, that I do not believe that in any hospital in the country are these two important principles carried out with greater perfection. How much the neglect in washing the walls had to do with the origin or spread of the disease I am unable to say; but certain it is, that when they *were* cleansed the numbers of cases sensibly decreased from that time.

Cleanliness is not confined to the wards alone; it applies also to the dressings, which are frequently changed, fully as often as occasion requires, and the frequent use of disinfecting washes does away almost entirely with the foul stench that is so commonly connected with surgical cases.

As soon as a patient was found to have the disease, he was isolated as much as possible, care was also taken that he should use his own sponges and have them washed separately, but these precautions had seemingly but little influence in staying the progress of the malady. The slough, in the majority of cases, involved only the skin and cellular tissue, while, in a few exceptional cases, it extended to parts deeper seated.

The treatment consisted in thoroughly cauterizing the parts with strong nitric acid, which had the effect in almost every instance of arresting the progress of the sore, while the use of a wash of dilute nitric acid (nit. acid ʒj. aqua Oj.) aided to separate the slough, which generally took place at the end of a week or ten days. Various other applications were resorted to, such as sol. chlorate pot., chloroform, acetic acid, yeast, etc.; but I am disposed to think the best effects were derived from the use of the first mentioned remedy. When the slough cleared itself off, as is usual, exuberant and florid granulations took its place, and the healing process went on very rapidly. Ulcers which before were indolent, and which presented the same appearances for weeks, after they had been the seat of hospital gangrene, the whole character of the granulations was changed and a rapid cicatrization was the result. The rapid healing was so manifest that in one case, where there was left a granulating surface of six square inches, it healed over in almost as many days.

The disease showed itself in the main house, but was by no means so general as in the other building. It has now almost entirely disappeared in both divisions. Notwithstanding so many were affected, there was not one fatal case; this fact, which is frequently noticed now-a-days, forms a striking contrast to days gone by, when its mortal tendency justly entitled it to the appellation, "the scourge of the Hospital."

Amputation of thigh—Convulsions.—In continuation of Dr. Parker's term of service in the last report, I will refer to a second amputation of the thigh which he performed for railroad injury. Alanson's method, which seems to be a favorite one with the doctor, was resorted to; the stump healed kindly. There was nothing remarkable in this case, save that the child (aged 5 years) was of a strumous habit, and having a large head, suffered from a series of convulsions which were so severe, and of such long duration, that there seemed to be no chance of saving the little fellow. The second day after the operation he had eleven of these convulsions, some of which lasted half an hour. This condition of things was followed by a coma which lasted for two or three days; in the meantime the convulsions continued, though they were by no means of such frequent occurrence. He was well fed with wine whey, beef tea, iron, and a blister was placed on the back of his neck. By careful nursing and the use of these means, contrary to the expectation of every one, the little fellow brightened up at the end of the fourth day and from that time went on steadily improving. He has now entirely recovered, and, as he struts about on his little crutches, is as proud of his stump as should the operator be of the case.

The case of extensive abscess of thigh, which I reported in my last, amputated by Dr. Parker, sank and died from profuse suppuration ten days after the operation.

Urethrotomy.—The following interesting case occurred during the service of Dr. Markoe in the second surgical division:

The patient, a seaman, 28 years of age, suffered from gonorrhœa several times. The last attack, which was four months previous to admission, was followed shortly after its first appearance by chordee. As a natural consequence, he suffered a great deal of pain, and in a fit of desperation he struck the offending member against a post, causing a considerable amount of blood to flow from the urethra. As the result of this, in the course of time, a traumatic stricture developed itself about three inches from the meatus; this became more and more contracted until such time as he applied for admission, when he could only pass his water in drops.

Various means were resorted to in the attempt to dilate the parts, but proved of no avail. For a day or two after his admission, so great was his distress that it was feared the bladder would have to be punctured or perineal section performed. But, inasmuch as the stricture was situated in the straight portion of the urethra, Dr Markoe thought proper to relieve it by means of a *urethrotome.* The patient was etherized, and this instrument was introduced down to the point of stricture, which was divided; it was then withdrawn. Next the doctor commenced with a No. 3 straight steel bougie, passed it through without any trouble; this was substituted by a larger and still larger one, until a No. 11 was passed with comparative ease, after which a large sized catheter was introduced and drew off nearly a quart of urine. The whole operation did not exceed five minutes in duration. The catheter was allowed to remain in the bladder for the next twenty-four hours, at the end of which time it was removed, when the patient could pass a fair-sized stream without much trouble. There was no occasion to use a catheter after this, and a solid instrument was introduced daily and allowed to remain a few minutes to keep the canal open. Commencing with a No. 9 and increasing in size, in the course of four days a No. 12 could be passed. This instrument was introduced then every other day until he was discharged, cured, the tenth day after the operation, able to pass as large a stream as he ever had. He was advised, on leaving, to continue the use of a bougie twice a week for one or two months. The case was an exceedingly interesting one in the happy result which followed the course of treatment adopted.

Dr. Markoe also reduced a dislocation of the thigh of the dorsum ilii by taxis, the patient being anæsthetized.

Of amputations he performed one of thigh and one of arm, in both instances for compound fracture; in the former case the result of the falling from an embankment, in the latter an injury from machinery. In both the lateral flap operation was made; which is a favorite method of amputating with the doctor; aside from any other advantages, it certainly makes a very pretty stump. This was eminently the case with both of these.

Dr. Halsted performed two amputations of the leg and one of the arm; operated for strangulated femoral hernia and upon a venous aneurism of the neck and throat by injection of the perchloride of iron. All the amputations did well; the doctor very rarely is unfortunate in the matter of sloughy stumps, for the reason that he is certain to operate a respectable distance above the point of injury or disease and through sound parts. Could not a great deal of sloughing be prevented by these means?

A great deal more could be saved, if conservatism were not carried to too great an extreme, and there would be fewer bare bones projecting from unsightly stumps—fewer reamputations.

Varicose aneurism of neck, and throat, treated by injection of perchloride of iron.—This case is worthy of particular note.

The patient was admitted in the service of Dr. Halsted, June 2, 1859, with an irregular swelling of the neck, on the right side posteriorly, which he says existed since his earliest recollection. It was soft and elastic to the feel, easily compressed, formed of two or three irregular protuberances, the whole being very little larger, in its distended state, than a hen's egg. Last December, for the first time, he noticed an enlargement of the right tonsil, which was of a bluish tint, proved to be caused by distended venous twigs. Continuing to enlarge very slowly, this varicose condition extended back upon the posterior wall of the fauces. On opening his mouth, the turgid vessels could be plainly discerned clustered together in knotty, tortuous masses. He complained of no great pain, only of a difficulty in swallowing, caused by the enlargement of the tonsil, which was twice the natural size, and the presence of these masses in the fauces. I should have stated that this condition of the vessels, as also the swelling on the outside, varied with the force of circulation, especially becoming distended when he would lie on the affected side. As far as could be ascertained, the aneurisms seemed to be connected with each other.

Previous to entering the hospital, he consulted an eminent surgeon of this city, who advised ligation of the carotid of that side, as the only expedient, but the patient not having sufficient of the "wherewithal" to tempt the operator, he thus escaped the operation.

On admission, Dr. Halsted deemed the case favorable for the injection of the perchloride of iron. The patient was directed to lie upon his right side for an hour or two, when the tumors became distended; the doctor then injected 15 drops of the liquid into a portion of the tumor upon the neck, and in a few seconds a coagulum could be felt in that spot, somewhat circumscribed and about the size of a large hickory-nut. The instrument used was Leon's, which was brought from Paris by Dr. Suckley, and kindly loaned to the Hospital. A little œdema began to show itself at the end of an hour after the operation, but subsided altogether in a day or two, leaving a hard, cartilaginous-feeling clot. In the course of the next three or four days the remaining portion of the tumor was ininjected; the same quantity was used and with the same result. The tumor upon the neck is obliterated, and that without any unpleasant symptom. The doctor proposes to make a similar attempt upon the masses in the fauces, but the patient's health being naturally a little delicate, he is advised to leave the hospital for a month or two, at the end of which time he promises to again present himself. The operation thus far is successful, and if the injection in the fauces is attended with a like result, who can but admit that it is far preferable to ligation of the carotid, notwithstanding it may spoil a pretty operation?

Strangulated femoral hernia—Operation—Recovery.—The following case is also of interest: A. B. H., aged 52, a native of Mass., was admitted to the hospital July 17, with a strangulated femoral hernia. He had been ruptured, according to his account, for the last eight years, but did not recollect anything that could have given rise to it. He suffered no inconvenience from it, except that he was compelled constantly to wear a truss. On the morning of the 14th, three days before admission, he experienced considerable pain in the abdomen, and also noticed that the hernia was increased nearly twice its natural volume, and could not be replaced. He had no vomiting till Saturday following; this, however seems to have been caused by some cathartic medicine which he had taken to "move his bowels;" not having had a passage since Thursday morning before. The medicine did not operate as he had wished it, and up to the time of his admission he was "unmoved." On Sunday afternoon, having some little pain in the tumor, and finding that still all efforts to reduce it were unavailing, he consulted a physician, who succeeded in reducing it one-half; further it was impossible to proceed by taxis alone, and having no convenience for operating, he advised his speedy removal to the hospital. On admission, about 5½ P.M., the patient did not complain of any great pain, and could bear a tolerable firm pressure over the tumor, without flinching. The tumor was dull on percussion, about the size of a goose egg, and in the situation of inguinal hernia; but this was disproved by the finger passing up the whole length of the canal. Pulse was 100, skin moist, no perspiration since the morning of the day previous.

Notwithstanding the symptoms were not urgent, Dr. Halstead, satisfying himself that it could not be reduced except by an operation, determined to give him the benefit of the knife, inasmuch as he was satisfied if such a procedure was delayed, and grave symptoms began to show themselves, just in that proportion would the life of the patient be jeopardized.

The patient was accordingly etherized, an incision was made along the course of the tumor in its long axis, and the gut being exposed, notwithstanding it had been strangulated full three days, was in a good condition, and as such, after dividing the stricture, it was returned into the cavity of the abdomen. A compress and spica were applied, the wound being brought together with sutures. The patient was kept under the influence of a grain of opium every hour for the ensuing 24. The next day, the pulse being 80, having decreased 20 since the day before, the opium was administered only every three hours. The third day the opiates were discontinued altogether, and on the morning of the fourth he had a spontaneous evacuation from his bowels. This occurred every morning after. The wound healed for the most part by first intention, and at the end of fifteen days he was up and about.

This case I think is interesting, not only in its result (for it is the first case of operation for strangulated hernia that I have seen recover) but in the matter of diagnosis. The situation of the tumor was high up, and one, in looking at it, would have decided that it was inguinal, yet this one was proved to be out of the question by the finger passing up the canal. Then again, the tumor was too high to be a classic femoral hernia. The only way to reconcile these facts was to suppose that it was a case of femoral hernia curled upon itself, upward over Poupart's ligament, which proved to be the case.

NEW YORK MEDICAL UNION.

E. LEE JONES, M.D., PRESIDENT; A. L. LOOMIS, M.D., SECRETARY.

Pyæmia following disease of the os calcis.—Dr. Elsworth Eliot related a case of death from pyæmia, depending upon disease of the os calcis of the right foot, and consequent suppuration, after an illness of 5½ days. S. E——, of scrofulous diathesis, aged eight years. Feb. 1st.—Attended school two miles distant from home, returning at night as well as usual. During the night he awoke with pain in his right foot, and had a chill. The two following days he was unable to use his foot, but did not suffer pain when it was at rest. On February 4th he was able to locate the pain beneath the external malleolus, over a surface as broad as the finger, where there was also a slight redness. He was restless, at times delirious, complaining of intense thirst.

Feb. 5th.—Swelling and pain in the foot greatly increased. At 12 M. he had a convulsion, pulse 144 per minute and feeble. Mind active, but not recognizing those around him. 2 P.M.—Swelling in the foot increasing and extending up to the knee, the surface resembling simple erysipelas. There is a continual tendency to muscular rigidity: pulse counted with difficulty, in which condition he remained till 11 o'clock the following night, when he died.

Autopsy, twenty-two hours post mortem.—Body not emaciated, right foot and leg uniformly swollen to the knee. Below the external malleolus there is a slough the size of a quarter of a dollar. After turning off the integuments, the cellular tissue, from the external edge of the the tendo achillis to a line corresponding with the articulations of the os calcis and cuboides, was seen to be moderately infiltrated with grumous pus, and the parts adjacent to the sloughed skin were discolored, boggy, and more abundantly infiltrated. Exposing the outer surface of the bone by a flap turned upward to the malleolus, about ʒj. of pus was seen lying upon the bone, but not filling the cavity between it and the soft parts: and on the inner surface of the flap, were evidences of an unsuccessful attempt to wall in an abscess by lymph. Pus of the same character was found upon the inner surface of the bone, and a large communicating sinus had resulted from the complete destruction of the bursa that should exist between the tendo achillis and the posterior surface of the os calcis. The cartilages of articulation with the os cuboides and astragalus were of a bright vermilion tint, but retained their smooth, glistening surfaces. The corresponding cartilages of these bones presented similar evidences of inflammation. The synovial membrane of the ankle-joint was apparently quite healthy. Nothing abnormal was found in the greater saphena; but on making the section to expose the venal comites of the posterior tibial artery, globules of pus escaped from two of their tributaries. A section of these veins, extending from the malleolus half way up the leg, was removed; pus was obtained from the lower third of the interior of each; but their internal surfaces were healthy in appearance; nor was there hardening or thickening of their tissues. The internal, external, and posterior surfaces of the os calcis, except the portion of the latter to which the tendo achillis is attached, were quite destitute of periosteum.

Phthisis proving fatal during pregnancy.—Dr. T. G. Thomas, related a case of death from phthisis in the eighth month of pregnancy. When first called to visit the patient she was moribund; though the fœtal heart continued to beat 160 per minute. The patient died in a few hours. Child not delivered; autopsy 12 hours, P.M.—kidneys in second stage of Bright's disease; a large amount of tubercular deposit in stage of softening, found in the right lung. In the examination of the uterus and its contents, Dr. T. was enabled to substantiate the fact, that a direct current is transmitted from the vessels of the uterus to the placenta. Air and water could be forced from the uterine sinuses, to the sinuses of the placenta; which, to the doctor, explained the cause of hemorrhage when there is a partial detachment of the placenta, and the true reason why in such cases it is best to entirely detach it; for the blood flowing from the uterine vessels into the non-detached portion of the placenta, and then into the cavity of the uterus, is only arrested by the entire detachment of the placenta, and the consequent entire contraction of the uterine vessels.

Fracture of cranium.—Dr. Finnell exhibited a parietal bone with a fragment of brown stone, the size of a chestnut, imbedded in it, fracturing the inner plate of the bone, causing a depression of its inner surface ¼ of an inch. For ten days after the receipt of the injury, no unfavorable symptoms presented themselves, at which time tetanus commenced, and in four days terminated life. Dr. F. asked if trephining had been resorted to at the time of the occurrence of the tetanus, would the fatal results have been avoided? A discussion followed, in which the weight of argument inclined to the opinion that trephining at that time would have afforded no relief.

Ovarian abscess.—Dr. Blumenthal related a case of ovarian abscess which occurred in a previously healthy woman, aged 22 years. Eight weeks after the last appearance of the menses, she received a fall, and immediately after began to suffer severe pain in the left hip and loins. Two weeks later, she again fell, and contused her hip on the same side; which was followed by a discharge of blood per vaginam. She believed herself pregnant at this time, about 2½ months. From this time she grew daily worse, and on the 11th day from the first occurrence of the hemorrhage, Dr. B. saw the patient the first time, when he found her suffering intense pain over the region of the left ovary, with high febrile excitement. On the preceding evening, she had passed clots which included the ovum. An antiphlogistic treatment was pursued for five days, when Dr. B., in making a vaginal examination, detected a soft swelling, high up, and to the left, about the region of the ovary. Hectic now came on, yet the chills, which occurred once or twice daily, were not violent. A tonic and stimulant treatment was now pursued. Five weeks after Dr. B.'s first visit, there occurred a profuse discharge of pus, per rectum. This discharge continued two weeks, varying in quantity from four ounces to ½ a pint, daily, when it gradually diminished. The pain subsided—the chills ceased, and the patient entirely recovered the use of the limb, which at one time, by muscular contraction, was shortened about four inches. The doctor remarked that he considered this case of interest, as demonstrating the spontaneous opening, per rectum, of an abscess, that rarely ends in so fortunate a manner without surgical interference.

Stricture of urethra—Operation.—Dr. H. B. Sands related an operation for stricture of the urethra. A gentleman came under Dr. Parker's care, suffering from thirty-six hours' retention of urine. He had had gonorrhœa 13 years before, from which time he had been troubled with a gleet. During the past year his stream of urine had gradually grown smaller, and there was now a permanent stricture. Dr. Parker, on examination, found a stricture, first at the meatus, which he divided, then another at the bulbous portion of the urethra, impermeable. The bladder was punctured through the rectum, yet the retention the next morning was as severe as the preceding day, and the puncturing was repeated. The case then came under the care of Dr. Sands for an operation. On the following day, Dr. S. passed a catheter down to the seat of stricture, and cut through the bulbous portion of the urethra down to the catheter. He then passed a second catheter through the wound, into the bladder, on the removal of which, the first catheter was passed through the wound into the bladder. The operation was entirely successful, and the wound healed by granulation.

PART SECOND.

CRITICAL ANALYSIS.

Biblical and Talmudic Medicine. By R. J. Wunderbar. *Reviewed by* M. Blumenthal, M.D., Physician to Jews' Hospital, New York.

(*Continued from page* 113.)

After the death of King Solomon, the Sepher Rephwoth, or Book of Cures, which he had compiled was probably brought traditionally to the Prophets, who added such facts as were taught them by observation and reflection. Indeed, the prophets were often resorted to in extraordinary cases, and by their knowledge often effected cures; thus we have numerous instances mentioned in Scripture which presuppose a certain amount of medical knowledge.

During the reign of King Hezekiah, when the people of Israel had fallen into idolatry and worshipped the brazen serpents, he determined to abolish everything that tended to superstition, and therefore also suppressed the "tablets of medicine as leading to man-worship and ignoring the dependence of man upon God for restoration to health." The people at this period resorted to the temples to bring offerings to soothsayers and fortune-tellers in imitation of their pagan neighbors and in total disregard to the laws of their God. But the pious king's faith was so strong, that when he was himself taken ill, he did not resort to the book or tablets for information to be cured, but addressing himself in prayers directly to God, relied upon his help alone, and was restored. When, then, we see the practice of medicine thus virtually expunged, even during the reign of Hezekiah, it is not surprising that nearly every trace thereof disappeared during the Babylonian Captivity. As in former times in Egypt, under the galling yoke of the Pharaohs, even so now, all medical knowledge among the Israelites had to sink beneath the burden of their misfortunes."

"The uncertain and deplorable existence of the Israelites during this period, when the most hopeful 'hung their harps on the willows on Babylon's streams' and in dumb despair mourned for Jerusalem, annihilated the last glimmerings of all intellectual aspirations and destroyed the last sparks of poetry or art among them. For this reason alone, then, we look in vain for medical culture during this period of utter darkness."

"It is probable," says our author, "that Ezra, who may be considered a second Moses, from the political and social organizations which he restored, aided also in introducing medicine once more among the Hebrews. According to the Talmud, it was an imperative duty of the members of the Sanhedrim and Grand Synod, of which Ezra was president, to inform themselves in all languages and all sciences, particularly such as could have any relation to medical jurisprudence."

There were, however, great obstacles to be overcome. In introducing the practice of medicine among people that had just been freed from the superstitious examples, habits, and notions, of the pagan Chaldees and Persians, which they had learned during their exile, it was essential that no such dangerous and heathenish influences should be associated with it. This danger is the more apparent when we remember how these superstitious Persians and crafty Greeks and Romans held that knowledge and dispensed it in pompous style in grand temples, on sacred mounts, and consecrated groves, thus tempting the credulous and ignorant with astrological prophecies, etc. How easily could they thus have been misled!

Another objection, however, was met: and that was the then somewhat prevalent doctrine of fatality! So that as "God is the Lord of Nature, which He in his infinite wisdom and goodness governs and directs, so, in all cases of disease, help must come from Him alone, and not also through the physician," a doctrine at whose foundation lies an idea, the mystery of which neither the philosophy of ages, nor the advanced state of science, has yet succeeded in unravelling, or shall ever succeed in clearing up satisfactorily.

This doctrine continued in force for a long time, so that when, at last, physicians were appointed to attend the priests of the Temple—who by reason of their duties of office were often attacked by sickness—the appointment could only be made by special process.

The eyes of the people appear, however, from this time forward, to have been gradually opened to the true aspect of the question, and among the earliest advocates of the necessity and legality of employing physicians was Jesus Sirach. "*He* (said by some to have been himself a physician) *recommends the physician as an instrument of God, whose assistance may be taken in all faith and confidence and without the least fear of thereby offending Providence.*"

From this period on (and particularly about the time just preceding the destruction of Jerusalem by Titus, as well as the 1st century thereafter), a considerable number of well-educated physicians existed.* The Talmudists themselves paid particular attention to the study of natural history and anatomy, in order to qualify themselves as judges, as also from a pure love of study, seeking therein a solace for lost country, king, and nationality.

"Thus the Talmud relates of the disciples of Rabbi Ismael Ben Elisha, who died immediately after the destruction of Jerusalem, that they dissected the body of a prostitute, who had been executed, in order to learn the relations of the internal organs of the human body."

As another proof that the ancient Hebrews had some knowledge of anatomy, the following extract is made from the "Sohar" (a composition ascribed to Rabbi Simon ben Jochor, who lived 140 years after Christ): "In the skull there are three cavities in which the brain lies.

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* These were probably educated in the celebrated school of Alexandria.

Through thirty-two canals three parts of the brain are sent to the whole body, upon this side and upon that side; thus they surround it on all sides and distribute themselves to all its parts." A very clear description of cerebrum, cerebellum, spinal marrow, and spinal nerves!

And now the prejudices existing against the practice of medicine appear to have been remarkably diminished, so that some of the most learned Talmudists and scholars lent themselves to its study and soon distinguished themselves. Indeed, so far from offering any objections, they now found occasions to adduce passages from the Bible to sanction the vocation of physician. A large number soon arose, and it became the duty of every town to have *at least one physician* within its walls. Among these is particularly mentioned, by our author, Theudas, of Laodicea, who lived from the time of Jerusalem's destruction to the reign of Hadrian (70 to 120 after Christ) and who had studied in Alexandria. He is said to have written a book on medicine and to have possessed such anatomical knowledge as to be able to declare "that the bones (contained in a basket given him for examination) consisted of the spinal vertebræ of not one but several bodies." In this connection twelve celebrated physicians are mentioned, and a short abstract of their history and labors given, and "although it is probable that some of these wrote books on medicine, none of them have come down to us and only so much has been preserved of their knowledge as was irregularly embodied in the Talmud, being spread over the entire work without system or order, and only indirectly in elucidating certain points in debate, etc.

Regarding the discipline of Jewish medicine, a point of considerable importance and interest is, that at this early period there was a distinction made between the physician and the surgeon, the latter attending to manual operations, such as venesection, amputation, and circumcision. Both were under the jurisdiction of a court, and none were permitted to practice without having a license from this authority. "No one shall engage in the practice of medicine (says the Talmud) if ever so learned and skilled in the art; and whoever is engaged therein without the permission of the Beth-din (Court of Decision) is punishable, even if ever so capable." p. [illegible]. Thus it appears that in this respect there was more system, equity and justice, even then, in existence than in some of the most civilized countries of the present day, where any quack can impose upon the ignorance and credulity of the public.

As a proof of the liberality and religious toleration of the Rabbis, our author states that not only did Jewish physicians cure non-Israelites, but they,* themselves, often employed pagan physicians, provided the latter did not abuse their influence and opportunity to dissuade the Hebrews from their faith. Even the act of circumcision might be performed by a non-Israelite where a Hebrew could not be obtained. At the same time, as an example of their strict adherence to the moral laws, the following case is related in the Talmud: "A man had become dangerously ill in consequence of an uncontrollable passion for another's wife, and the physicians declared that he must die unless he could approach her ; the Rabbis permitted him to die rather than sanction such an outrage on morality."

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* The Israelites.

Finally, let us add, that although the physician was to receive remuneration for his services, "it was not considered as pay for his treatment of the sick, as that was his duty, but rather as a contribution to reimburse him for loss of time and labor which he thereby sustained."

(*To be continued.*)

A Treatise on Human Physiology; designed for the use of Students and Practitioners of Medicine. By JOHN C. DALTON, JUN., M.D., Prof. of Physiology and Microscopic Anatomy in the College of Physicians and Surgeons, New York, etc., etc. With 254 illustrations. Philadelphia : Blanchard & Lea, 1859. pp. 608.

IN this treatise, physiology is studied under the general heads of *nutrition, the nervous system, and reproduction.* These three divisions, taken in their most comprehensive sense, are found to embrace the greater number of questions relating to pure physiology. The complete study of nutrition leads to an investigation of the inorganic and organic proximate principles—the nature of food, the processes of digestion and absorption, the functions of the liver and spleen, the blood and circulation, the respiration, secretion, excretion, etc. The nervous system may thus embrace every question relating to the structure, arrangement, and phenomena of this system, while reproduction completes the circle of physiological studies. This division of subjects does not admit of that encyclopædic view of physiology which standard authors have taken, nor do we think it desirable, if physiology is to be embraced in the regular curriculum of studies of our schools. Physiology should there be taught as a pure science, and only such questions should be discussed as are susceptible of demonstration.

The proximate principles are considered in the first three chapters, as, 1. *Inorganic,* as water, chloride of sodium, and potassium, etc. 2. *The crystallizable substances of organic origin,* as fat, starch, etc. 3. *Organic substances proper,* as albumen, fibrin, etc. The various substances included under these heads are very briefly described as preliminary to more important subjects The relative importance of the proximate principles as above classified in the food, is next briefly considered, and the following conclusion arrived at : "That no single proximate principle, nor even any one class of them alone, can be sufficient for the nutrition of the body ; but that the food, to be nourishing, must contain substances belonging to *all* the different groups of proximate principles."

The physiology of digestion is treated, as we had anticipated, with admirable clearness and precision. The *saliva* has hitherto been supposed to exert an important influence upon the food in changing amylaceous substances into sugar. Though this change is effected in the test tube, yet, according to Professor Dalton, the gastric juice interrupts the process, which could scarcely have been initiated during mastication and deglutition. In his opinion the function of the saliva is purely a physical one—viz., to facilitate mastication and deglutition. *Stomach digestion* is considered at length, embracing a review of the progress of research into this process, and the present opinions of physiologists. *Intestinal digestion* is next treated of, and the action of the intestinal and pancreatic juices pointed out, the former in converting the starchy ingredients of food into sugar, and the latter in reducing the fatty matters to an emulsion.

The next step in the process of nutrition is *absorption*, and the author points out the peculiar construction of the glands and villi of the intestines, and the manner in which absorption is accomplished. The *bile, and the formation of sugar in the liver*, are discussed in the following chapters, as subjects having an intimate relation to nutrition. The recent paper of Dr. Dalton on the *constitution and physiology of the bile*, is known to readers, and will prepare them for many of the views here presented. Pettenkofer's test for bile is minutely described, and recommended as by far the best. The important question, What is the function of the bile? is ably considered, but no definite conclusion is reached. Though the function of digestion may be completed without its presence, still experiment proves, that if the bile is drained off through a fistula of the gall bladder, and none is allowed to enter the intestines, the animal will emaciate and die. But experience fails to detect the bile in the portal circulation. Dr Dalton concludes, therefore, that the function of the bile is not accomplished when it is discharged from the liver into the intestine, but that the biliary ingredients, altered and transformed in the intestine, reënter the blood under some new form, to complete their function in some other part of the body. This chapter is replete with interest, from the numerous original experiments of the author.

Dr. Dalton briefly presents and advocates the views of Bernard, on the glycogenic function of the liver, without, however, giving to his opponent, Sanson, that attention which his opinions deserve.

The *spleen* is next considered, but nothing is added to our present knowledge. Dr. Dalton acknowledges its function unknown, but is disposed to ally it with other glands, as the lymphatics.

Proceeding in the study of nutrition, the *blood* next demands attention. In regard to the red globules, Dr. Dalton holds that they are homogeneous in structure, being of the same color, consistency, and composition throughout; he thus discards a cell-wall, and an inclosed fluid, as still held by eminent physiologists. He regards the red globules as permanent, anatomical forms, undergoing in different parts of the body a constant interstitial metamorphosis, by the absorption of nutritious materials from the blood, and giving back to that fluid other substances which result from their internal waste and disintegration. We regret that it was not within the province of the author to explain the relation of this view of the red globules to certain pathological conditions, as chlorosis, scorbutis, hemorrhage, etc.

The white globules he regards as independent forms, without a nucleus, and never changing into the red globules.

The remaining chapters in this section on *respiration, animal heat, the circulation, secretion and excretion*, are written in the most concise manner, and yet with sufficient detail to afford a complete and most philosophical view of these important functions. We cannot, however, dwell upon them, but pass to the second section, the *nervous system.*

This division of the work falls considerably below the preceding section in completeness and originality, and will afford the least satisfaction to the advanced student. Indeed, while little is to be found in this section which is not contained in ordinary text-books of physiology, much is omitted which is necessary to a complete view of the functions of the nervous system. In chapter first, the general character and functions of the nervous system are considered—its development from the lower to the higher order of animals being traced—and closing with the structure of the encephalon. Chapter second is devoted to nervous irritability and its mode of action, and the distinction is drawn between the nervous force and electricity. He concludes that the nervous force "must be regarded accordingly as distinct in its nature from other known physical forces, and is altogether peculiar to the nervous tissue in which it originates." Chapter third treats of the spinal cord—first, the seat of sensation and motion in the nervous system, and the seat of sensibility and excitability in the spinal cord, and the crossed action of the spinal cord; and finally, its reflex action, are considered. In chapter fourth we have the brain, and the functions of its several parts, treated with great clearness and precision. The functions of the several cranial nerves, and the great sympathetic system form the subject of the concluding chapters of this section.

The last division of this work is devoted to *reproduction.* The writings of the author on this and kindred subjects had led us to anticipate that this part of his treatise would give to it the highest claims to consideration among contemporary physiologists. Nor are we disappointed. The whole subject is treated with great originality, through its successive phases, from the origin and reproduction of plants, and the lower order of animals, to that of the higher species. We decline to enter upon an analysis of this section, or even to notice its several divisions. To be appreciated it must be carefully studied as a whole. We commend it to the thoughtful and earnest student as a model of experimental investigation, logical deduction, and classical composition worthy of all imitation.

We cannot conclude this brief and imperfect notice without alluding to the fact that nearly all of the illustrations in this work are original, and are generally admirably executed.

The History of Prostitution: Its Extent, Causes, and Effects throughout the World. By WILLIAM W. SANGER, M.D., Resident Physician, Blackwell's Island, etc., etc. New York: Harper & Brothers, 1858; pp. 685.

This work purports to be an official report to the Almshouse Governors of the City of New York. The dedication to that "Honorable

Board" contains the following: "Yours was the conception, mine has been the execution of the work; to you am I indebted for many valuable suggestions; to your kindness for much encouraging approbation; and now to your hands I confide my labors, in the conviction, that they will not be futile; that your patriotism, your philanthropy, and your humanity will be at once enlisted in the cause."

From the introduction (p. 28), we learn that the Board of Governors propounded certain queries to the author in regard to the number of inmates of the hospital under his charge, affected with syphilis, their increase, the liability of their leaving the hospital uncured, and thus infecting others; the hereditary effects of syphilis; and finally, his views as to the best means of checking and decreasing this disease, and what plan, in his opinion, could be adopted to relieve New York city of the enormous amount of misery and expense caused by syphilis.

Impressed with the magnitude of the subject submitted to his consideration in these interrogatories, Dr. Sanger replied to the communication of the Governors, in substance, that it would be impolitic to report the statistics of that institution, as it might lead the public to believe that nineteen-twentieths of the disease resulting from prostitution in this city found its home there, while the fact is that "there are but few more prostitutes on the island than are to be found on the same number of acres in certain portions of the city; and as for the venereal disease, why, gentlemen, the island has the advantage. It is the least dangerous locality." He then proceeds to draw the following startling picture of the prevalence of this vice in New York: "It has more than kept pace with the growth of our city. Unlike the vice of a few years since, it no longer confines itself to secrecy and darkness, but boldly strides through our most thronged and elegant thoroughfares, and there, in the broad light of the sun, it jostles the pure, the virtuous, and the good. It is in your gay streets, and in your quiet, home-like streets; it is in your squares, and in your suburban retreats, and summer resorts; it is in your theatres, your opera, your hotels; nay, it is even intruding itself into the private circles, and slowly but steadily extending its poison, known but to few, and entirely unsuspected by the majority of our citizens." From these considerations he felt it his duty to take a wide survey of the field, collect all the facts in relation to this vice, trace to its fountain-head prostitution and its attendant diseases, and thus bring the subject before them in its proper color and dimensions.

From these preliminary statements the reader will learn the circumstances which brought this work into existence. Any effort of the Governors (to whose care are intrusted, not only the ordinary pauper population of the city, who seek public charity, but also that large class of persons who, by vicious practices, have contracted disease and require charitable aid to restore them to health), to diminish the number of their beneficiaries by eradicating the source of the evil, is, in the highest degree praiseworthy. The object commends itself to the good sense of every citizen, and we believe that every legitimate effort by the proper authorities to control prostitution and limit its baneful influence by judicious legislation, will be promptly sustained by public opinion. As to the question how far prostitution can be controled by civil authorities, the time has come when a definite answer can be returned. The history of legislation to control prostitution in continental cities, authorizes the following reply: "Prostitution can be so controled by municipal regulations and a proper sanitary police, that the diseases incident to it shall scarcely be known. Such results might not readily be obtained in American cities, but there is no doubt much might be accomplished by the earnest, and well-directed efforts of municipal authorities, sustained by an enlightened public opinion."

But now to approach this subject with a view to obtaining legislation, without at the very outset prejudicing fatally the very power whose favor and aid was to be invoked, is a question of vital importance. That portion of the public mind without whose true and permanent support such an undertaking must utterly fail, was to be enlightened, and its sympathies thoroughly enlisted. But to that public the subject of prostitution, however considered, was revolting, and the bare allusion to the term "legalizing prostitution," was sufficient to stamp the movement with infamy. Evidently, therefore, the subject must first be candidly investigated, and in the light of a pure philanthropy, its prevalence determined by accurate statistics, and its evils, immediate and remote, its baneful effects upon public and private morals, and its interminable physical ills, be thoroughly exposed. That the Governors pondered this subject well, and foresaw the difficulties which would beset their efforts to introduce any reform, is evident, and they wisely proposed the preparation of a report embracing the points above alluded to, as the basis of their action. With this document they proposed to prepare the public mind to sustain them in their appeal to the Legislature.

The task of preparing this report was assigned, as has been seen, to the physician at Blackwell's Island. A more delicate and responsible duty can scarcely be conceived, for upon it depended the fate of the movement. The result of his labors is before us and invites our criticism. But we have neither the time nor inclination to review this work in detail; the most cursory examination is sufficient to form a correct estimate of its merits. Keeping steadily in view the original design of this report, a candid criticism must decide that the author has signally failed to furnish the Governors with a document which will aid them in their undertaking. Indeed we shall be gratified if it does not materially retard this movement and put further off the day when prostitution in this city shall be controled by salutary police regulations.

Two-thirds of the work is devoted to a so-called history of prostitution, the tone of which stamps its character. Ancient and modern, sacred and profane history have been ransacked, and every incident that could gratify a prurient taste has been carefully selected, and, when decked in the author's fulsome style, transferred to this historical casket. A few interesting and instructive facts, bearing upon the subject of prostitution, may be gleaned from this review, but they appear as tame and incidental remarks, in contrast with the animated sketches of noted prostitutes; descriptions of disgusting rites and ceremonies of ancient and barbarous nations; the minute details of court intrigues of kings, nobles and courtesans; and historical incidents that have hitherto sought and found merited obscurity. No one can read this history of prostitution without feeling that he is perusing the literature of a brothel, nor will he be surprised at the rumor that this work finds such ready sale in that quarter.

The last third of the volume relates to prostitution in New York city. The statistics which form its basis were collected through the police department, and, if correct, as we must assume they are in the absence of any facts to disprove them, present a most revolting picture of our social state. Had these statistical investigations into the extent of prostitution in our city, and its concomitant evils, appeared as *the* report to the Governors, clothed in the sober prose of municipal documents, with an appendix, containing a concise history of legislation for the control of prostitution in continental cities, for the information of our authorities, Dr. Sanger would have placed in the hands of that board a document which would have laid a broad and firm basis for their future action. No person could have resisted its conclusions or failed to have been heartily enlisted in the great work of reform.

But appearing as they do, a part of the preceding history of prostitution, they are utterly worthless for the purpose designed by the Governors. To sustain the general tone of the work, and not to embarrass its redundant and peculiarly flowing style with dull statistics, each table is enlivened with the most select anecdotes; entertaining biographical sketches of the residents of Blackwell; instructive details of the habits of prostitutes; and glowing descriptions of their places of resort, scarcely paralleled in the famous Arabian Nights. We sincerely regret that the author should have rendered so completely useless the valuable material which he seems to have labored with great diligence to collect.

The last chapter in the work is devoted to *Remedial Measures.* Dr. Sanger condemns, very justly, the present system of committing the poor, who are affected with venereal, as common prisoners; this is occasioned by the absence of a proper hospital for their treatment. The remedial measures suggested are :

1. A suitable hospital for the treatment of venereal diseases.

2. A legally authorized medical visitation of all known houses of prostitution, with full power to order the immediate removal of any woman found to be infected, to the designated hospital.

3. The power to detain infected persons under treatment until they are cured.

This is the system adopted in Paris, and the one which we fain would hope to see, at no distant day, in operation in New York. But, unless other laborers enter the field, whose *single* aim is reform, the author of this work will not realize the satisfaction anticipated in the dedication of his work, "that I had some share in the effort which will induce future generations to remember with pride, that the first blow struck in the western world at the gigantic vice, prostitution, was aimed by the Governors of the Almshouse of the city and county of New York." Still we trust the Governors will not, after having probed this offensive sore, relax their efforts to apply the proper remedy.

Lectures on the Diseases of Women. By CHARLES WEST, M.D. Part II. *Diseases of the ovaries, vagina, bladder, and external organs.* Philadelphia, Blanchard & Lea, 1858.

We had occasion recently to notice the first part of this work, which consisted of twenty chapters. The present volume concludes the work. The second part embraces the diseases of the uterine appendages, the consideration of diseases of the ovary demanding a large portion of the work. In his review of the treatment of ovarian cysts, Dr. West presents important statistics, bearing upon the various operations practised. Tapping the cyst per vaginam, a method recommended by Kiwisch and Scanzoni, is not approved by Dr. West, who has operated three times, neither is excision of a portion of the cyst wall. Iodine injection meets with more favor, though he regards its success and propriety as a question unsettled. Ovariotomy is reviewed at length, its statistics produced, and the conclusion to which the author arrives is unfavorable to the operation.

We have but to reiterate the favorable opinion of Dr. West's work which was expressed in our former notice.

A History of the Discovery of the Circulation of the Blood. By P. FLOURENS. Translated from the French by J. C. REEVE, M.D. Cincinnati, Rickey, Mallory & Co., 1859; pp. 178.

This small volume is a concise, but severely critical, review of the various authors who have made pretentious claims to the honor of the discovery of the circulation of the blood. In the *first part*, the writings of Erasistratus, Galen, Servetus, Columbus, Cæsalpinus, Fabricius, Sarpi, Vasseus and Harvey, are analyzed and to each is assigned his place and importance in the progressive history of that great discovery. Though preceding physiologists had made important discoveries, all indicating the circulation of the blood, yet nothing was established when Harvey began his experiments; to him belongs the crowning glory of systematizing all the facts yet known, and, with the aid of his own experiments and observations, deducing the general laws of the circulation of the blood.

In the *second part* of the work, the author takes up the history of the fœtal circulation and critically examines the writings of Galen, Vesalius, Fallopius, Arantius, Carcanus, Harvey, Méry, and Duverney. Although Harvey advanced nearer to the true explanation of the fœtal circulation than his predecessors, yet his ignorance of the chemistry of respiration prevented his gaining a clear insight into this process. It was left to Duverney, a half century later, to supply that link in the chain of evidences.

Part third is devoted to the history of the discovery of the lacteals, the receptaculum chyli, and lymphatics. The discovery of Harvey, in

1619, animated all minds with the spirit of anatomical research; in 1622, Azelli discovered the lacteals: in 1648, Pecquet, the receptacle of the chyle; and between 1650 and 1652, Rudbeck and Bartholin the lymphatics. The author pursues at length, and with great literary acumen, his examination of the questions to which these discoveries afterward gave rise.

In *part fourth*, the author reviews the claims of Sarpi to the discovery of the valves of the veins, and concludes that the original discovery was made by Fabricius, Harvey's preceptor, and that all the knowledge Sarpi had of the valves he obtained from Harvey.

Part fifth has for its subject *Servetus and the formation of the spirits.* It is a most instructive chapter on the history of physiological discoveries from the fact that the author has had an opportunity of consulting the original work of Servetus, and establishing, beyond dispute, the fact that this writer discovered the pulmonary circulation. This volume, once owned by Richard Mead, of London, was the original copy which Colladon, the accuser of Servetus, used; the offensive passages are underscored. Besides, its leaves are partially burned, showing that it was rescued from the pile after the conflagration had commenced, when the author and work were burned together!

The subjects of the last two sections are entitled, *Guy Patin and the Contest between Ancient and Modern Philosophy*, and *Guy Patin and the Faculty of Paris.* They contain much instructive historical matter relating to that early period of French surgery.

We have rarely read a more entertaining and instructive volume than this. The translator, Dr. Reeve, has given to the English version all the spirit of the original.

Urinary Deposits; their Diagnosis, Pathology, and Therapeutical Indications. By Golding Bird, M.D., F.R.S. Edited by Edmund Lloyd Birkett, M.D. A new American from the Fifth London Edition. With eighty illustrations on wood. Philadelphia, Blanchard & Lea, 1859, pp. 382.

The present edition of this most useful manual has been brought out under the supervision of Dr. Birkett, a gentleman well qualified for the task. In his preface he states that he has availed himself of every means at his command to bring the matter of the work fully up to the present period. The additions are numerous and important and render this edition far more complete than its predecessors.

Third Report of the Clinical Hospital, Manchester. Containing results of Physical Development, Hooping-cough, and Transmitted Diseases. By James Whitehead, M.D. London, John Churchill, 1859.

In a preliminary notice Dr. Whitehead feelingly alludes to the death of his late colleague, Dr. Merei, who assisted in the preparation of the report. The report is a highly interesting review of the practice of this hospital. The number of patients admitted from Jan., 1856, to the end of October, 1858, was 2.584, the ages varying from one month to three years; it is therefore a report upon infantile diseases.

The number of deaths was 217. being over 8 per cent., the largest number occurring from atrophy. The cases of hooping-cough and syphilis treated are tabulated. Of the former. 211 cases were treated, of which 32, or 15 per cent., died, only one, however, was uncomplicated. Belladonna was employed with the best results. Syphilis numbered 63, in 46 the taint was hereditary. in 14 it was conveyed by vaccination, in one through the breast-milk of a nurse. Mercury is considered indispensable in the treatment. The report will well repay a careful perusal.

A Manual of Elementary Chemistry, Theoretical and Practical. By George Fownes, F.R.S. From the seventh revised and corrected London Edition. Edited by Robert Bridges, M.D. Philadelphia, Blanchard & Lea, 1859; pp. 600.

The principal additions which the editors have found necessary to make, to render this work a complete exponent of the present state of chemical science, has been in the department of organic chemistry. This part of the work has been improved by additions and the rearrangement of subjects, to correspond to the advance that has recently been made in chemical science.

Elements of Medicine; a compendious view of Pathology and Therapeutics; or, the History and Treatment of Diseases. By Samuel Henry, Dickson, M.D., LL.D.; Prof. of the practice of Physic in Jefferson Medical College, Philadelphia, etc., etc. Second edition, revised. Philadelphia: Blanchard & Lea, 1859; pp. 768.

The author of this work has long occupied a high position as a teacher of practical medicine, and as an author. The volume before us is a careful collection of his former writings, with such additions as his continued study and enlarged experience have enabled him to make. His ultimate object was to furnish the student, the young practitioner, and the teacher, a compendious view of medicine, adapted to the wants of the beginner. The demand for a second edition proves that the author has accomplished his purpose.

The work is divided into two parts, the first being devoted to *general pathology*, and the second to *special pathology and therapeutics*. In Part First, we find the various questions relating to the nature, etiology, seats, phenomena, and tendency of disease, discussed briefly, but with that vigor of thought and clearness of style peculiar to the author. We have not space to enlarge upon any topic here introduced, but will refer to the section on etiology, in passing. At this time, when such widely different views are entertained in regard to the origin and spread of certain epidemic diseases, the reader will seek with interest the opinions of so well accredited an authority as Prof. Dickson upon the subject of contagion. We cannot recall a more intelligent discussion of the questions which this subject has originated, than is contained in this volume. Prof. Dickson favors the unpopular doctrine of the contagiousness of cholera, and yellow fever, and present an array of facts upon which these opinions are based, which are too pertinent to be hastily set aside by the profession. Part Second is devoted to a consideration of individual diseases, and affords to the student a rapid survey of the entire field of special pathology. To the industrious practitioner, this concise, but compendious review of practical medicine will prove acceptable, and to no authority can we more confidently refer him to determine the perplexing questions which daily arise for his solution than the work whose title is given above.

Extracts from the Records of the Boston Society for Medical Improvement; published in the Boston Medical and Surgical Journal. By Fitch Edward Oliver, M.D., Secretary of the Society, 1856–9. Vol. iii. Boston, 1859.

It is much to be regretted that our active medical societies do not more frequently give a permanent form to their records. Some of our most useful publications are of this character. The Boston Society of Medical Improvement, the published proceedings of which have always interested us, now wisely collects its scattered materials into a series of volumes, of which the third is before us.

In addition to its ordinary proceedings, there is a supplement of over 200 pages, consisting of the papers which have been read before the society. Many of these are of great interest, and several are illustrated. We commend the example of the Boston Society to our scientific medical societies generally.

The Action of Medicines upon the System; or, On the Mode in which Therapeutic Agents introduced into the Stomach produce their peculiar effects on the Animal Economy. By Frederick William Headland, M.D., etc., etc. Third edition, revised and enlarged. Philadelphia: Lindsay & Blakiston, 1859.

It is gratifying to record the success of this truly excellent work. The third edition is improved by additions to subjects which have undergone renewed investigation. We commend this treatise to the careful study of the student and young practitioner.

RECENT FOREIGN PUBLICATIONS.

Calmeil (L. F. —*Traité des Maladies Inflammatoires du Cerveau.* (*Treatise on the Inflammatory Affections of the Brain.*) 2 vols. 8vo. Paris. 1859.—The author of this treatise has been for thirty years atached to the medical service of the Maison Royale de Charenton, one of the largest insane asylums in France, of which he is now physician-in-chief. This asylum was the theatre of Esquirol's labors. The author states that this work is the result of long and patient study, and the observation of a multitude of facts. He has devoted much time to pathological research, and the advantages are ample in that asylum, if we may credit Esquirol, who stated that 25 per cent. of the 1,200 patients annually die.

The important conclusion to which he has arrived is, that insanity is the result of morbid changes in the nervous centres, most of which are appreciable to the microscope. Entering upon the study of cerebral pathology with these views, the author treats at length of the various changes in the nervous centres, their causes, course and termination. To physicians connected with our insane asylums we commend this elaborate work.

WILKS (SAMUEL).—*Lectures on Pathological Anatomy, delivered at Guy's Hospital during the Summer Session of* 1857–1858. London, 1859. 8vo. pp. 472.—Dr. Wilks is well known as one of the editors of Guy's Hospital Reports, to which he has made frequent and valuable contributions. He states that for fifteen years he has made a daily study of the dissections of the dead, and has himself recorded between 2,000 and 3,000 dissections, and has carefully abstained from making any statements not verified by his own observations. The work has that refreshing tone of original investigation of which publications are so frequently destitute.

DIXON (J).—*A Guide to the Practical Study of Diseases of the Eye, with an Outline of their Medical and Operative Treatment.* 2d edit. post 8vo. London, 1859.—The first edition of this work, published four years ago, was favorably received. The present edition has been carefully revised, some parts being entirely rewritten, while important additions have been made throughout the work, illustrative of the progress and present position of ophthalmic medicine.

LE GENDRE (E. Q.)—*Mémoire sur quelques variétés rares de la hernie crurale. (Memoirs on some rare varieties of Crural Hernia, with six plates).* Paris, 1858; pp. 65.—The rare varieties of crural hernia here treated of are: 1. *Crural pectineal hernia*, or the hernia of Cloquet, in which the hernial sac passing behind the femoral vessels lies in contact with the pectineus muscle, the aponeurosis of which will cover it. This form of hernia, first described by Cloquet, has been met with but four times. 2. *Crural hernia across Gimbernat's ligament*, or the hernia of Laugier. In this variety the sac escapes by the side of Gimbernat's ligament, instead of following the course of the vessels. 3. *Crural hernia with a diverticulum through the cribriform fascia*, or the hernia of Hesselbach. In this case the hernia traverses the cribriform fascia, and appears to have several lobes. 4. *Crural Hernia with diverticulum of fascia superficialis*, or the hernia of Cooper.

Principes et résumé de la Physiognomie (*Principles of Physiognomy.*) Paris, 1859, pp. 111.—This work contains a résumé of the opinions of writers upon physiognomy, with a discussion of its principles. It is amply illustrated.

PART THIRD.

MEDICAL RETROSPECT.

Report on the progress of Obstetrical Science and Diseases of Women; prepared for the New York Journal of Medicine. By E. Noeggerath, M.D.

I. PATHOLOGY OF NON-PREGNANT WOMEN.

1. *Klaproth on profuse hemorrhages of the vaginal mucous membrane, situated in the space between the clitoris and orificium urethræ (Transactions of the Berlin Obstetrical Soc.) Monatsschrift f. Geb.* xiii. 1 January, 1859.—Dr. Klaproth gives an account of four cases of hemorrhages occurring in the space between the clitoris and orificium urethræ.

Case 1.—After a protracted confinement and removal of the placenta, a profuse hemorrhage was observed, although the uterus appeared to be well contracted. On closer examination, the place above-mentioned was found to be the seat of the hemorrhage. On this spot the mucous membrane was sore, and exhibited a number of varicose veins, from which the blood issued in a full stream.

Case 2.—In a primipara, 24 years of age, 8½ hours of violent labor-pains were consumed for dilatation of the os, while the rest of labor lasted only a quarter of an hour. After the child was born, a hemorrhage occurred quite analogous to that described in the first case.

Case 3.—The same thing happened with an anæmic, irritable primipara, who had gone through a precipitate confinement. In every one of these cases the usual styptic remedies were unsuccessful, and the bleeding was at last stopped by the ligature *en masse*.

Case 4.—A non-pregnant woman broke down with a ladder, and fell with distended legs, so as to hurt her vulva against one of the lower steps, from which a considerable hemorrhage of the injured parts resulted. On examination, the region surrounding the clitoris was found suffused with blood, and somewhat swollen. The mucous membrane, immediately below the clitoris, exhibited two minute rents of a few lines in diameter. The hemorrhage ceased after application of cold water. In the discussion following, Dr. Martin mentioned several instances of profuse hemorrhages from slight lacerations of the labia minora, which had occurred in his own practice. Dr. Ravoth recommends compression and cauterization of the bleeding portions.

2. *Rokitansky, the uterus and its flexions (La Clinique Européenne* No. 17, April 23).—Dr. Rokitansky's article goes to show that the uterus is principally maintained in its erect position by a cellular stroma, which is to be considered as a continuance of the mucous membrane of

the vagina. Retroflexions are by far a less frequent occurrence than anteflexions, and are observed generally in consequence of abortion, or after confinements, while anteflexion is most commonly a congenital complaint, or the consequence of a catarrh of long standing, by large growths of ovula of Naboth, and consequent atrophy of cellular tissue. Both are caused by a degeneration (atrophy) of the above-named cellular stroma. These causes may be aided in effecting flexions by outside pressure, be it produced by the intestines, or a tumor in the ovaries or uterus. With regard to Virchow's theory, of the bladder producing anteflexion in its filled state, Dr. Rokitansky thinks that the pressure exercised by the bladder would not be strong enough to bend the uterus upon itself, while a filled state of the urinary bladder would rather be apt to reduce an anteflexed womb.

3. *M'Clintock, A. H., Extirpation of an inverted uterus by ecrasement (Dubl. Quart. Jour.* liii. Febr.)—In the case reported by Dr. M'Clintock, the patient had, for upward of twelve months, profuse discharges of blood from the vagina, which were at times so excessive as to endanger her life. The hemorrhage always came on at the menstrual period, and continued for fourteen or twenty-one days, but may be brought on at any time by undue bodily exertion. On making internal examination, a pediculated tumor, of pyriform shape, was found low down in the vagina. The neck of this tumor was embraced by the os uteri; it was fleshy to the feel, and perfectly insensible to ordinary manipulation; its surface was smooth, of a dark pink color, and, when scratched, blood was discharged. She complained of no pain, and had only felt a sort of aching for a short time after the more profuse loss of blood. In her confinement, fourteen months ago, much delay and difficulty occurred in the removal of the afterbirth, and ever since this confinement she has been subject to recurring hemorrhage. The case was altogether not clear with regard to diagnosis; while the history of the disease suggested the idea of an inversion of the womb, the smoothness and insensibility of the tumor, the absence of any bleeding points on its surface, and the small size of the tumor, which was about the size of a walnut, seemed to indicate rather the presence of a polypus.

When the tumor was drawn down beyond the labia, as a preparatory step for the operation, the os uteri was found entirely effaced—not a trace of it could be detected. On replacing the tumor within the vagina, the os again became developed; a bougie passed within it not quite half an inch, and was arrested at this height all around. From these explanations it was concluded that there existed a chronic inversion of the womb. On examining high up within the rectum, the uterus could be surmounted by the finger. Under these circumstances, the taxis was tried on three different occasions, by firm compression, and by upward pressure upon the body of the uterus, while during the brief intervals of relaxation, to allow the hand to recover its power, a steady pressure was maintained against the lowest part of the uterus, by means of a round piece of wood, about eight inches long, with a shallow cup-shaped extremity. The only effect upon the uterus was to reduce the size of the fundus and body. Under these circumstances, only one alternative remained, and that was the removal of the misplaced portions of the womb. Therefore a ligature of silk fishing-line was passed round the neck of the uterus and fastened after having been drawn moderately tight. Very considerable pain was complained of when this was done, and in the course of two hours it much increased, and she presented symptoms of general depression. By the aid of warmth and mild stimulants, reaction was brought about. A grain of morphia was given, soon after which the pain began to abate. The ligature was tightened, and the next day she was going on satisfactorily. At mid-day the ligature was drawn a little tighter. The uterus presented a dead white color. and the discharge from the vagina was decidedly fetid. The ligature had now been on for forty-eight hours. The ecraseur was now carried around the uterus and worked very slowly, eight minutes passing over before the uterus was severed. No hemorrhage of any amount ensued. At two o'clock she was easy: at seven P.M., the pulse was 120, she complained of pain, and there was considerable tenderness in the hypogastric region. A turpentine epithem was applied to the belly, and she was ordered half a grain of calomel and the same of opium every third hour. She passed the night tranquilly, and on the following morning (October 23d) the pulse had fallen to 104, the pains had nearly ceased, and there only remained some tenderness and some fullness above the pubes. There was a little discharge of a serous nature from the vagina. Her recovery proceeded gradually, and she returned home the 2d December, having greatly improved in health since the operation. In his further remarks, Dr. M'Clintock points to the difficulty of diagnosis in similar cases. In *nine* of the cases collected by Dr. Forbes, the inverted uterus was mistaken for polypus. It has been stated in the foregoing history, that when the uterus was drawn external, every trace of the os tincæ was obliterated, but reappeared when the organ was put back. This circumstance is one worthy of notice, as bearing on diagnosis.

4. *Harvey, Case of Stearrhœa Nigricans. (Transactions of the County and City of Cork Med. and Surg. Society.) Dubl. Quart. Journal*, liii. *Feb.*—Dr. Harvey communicates a very interesting case of this curious affection. The patient complained chiefly of intense pain in the temple and whole side of the head, which increased at night. In the daytime she was languid and chilly, and the circulation on the surface looked stagnant. Her eyes were heavy and dull, her hands and feet were disposed to be cold, and she suffered a great deal from weakness and pain in her back. Her appetite was bad; tongue smooth and pallid, with a thin, creamy coat; pulse very small and weak, seldom exceeding 80 to 84; bowels always obstinately confined, catamenia perfectly natural in all respects, and had been so for years. After having seen her a few times, Dr. Harvey noticed a black patch occupying each lower eyelid, presenting all the characteristics of stearrhœa nigricans. The surface looked slightly moist, and when observed through a lens of half-inch focus, the exudation appeared to consist of minute hairs, grains of carbon, and oily matter. The pigment could be readily washed off, especially when soda was added to the water. This continued increasing or diminish-

ing with the alternating severity and mitigations of the constitutional symptoms. Finally the colorations, as well as the constitutional derangements, gave way under a plan of treatment consisting of tonic aperients, generous diet, open carriage exercise, and similar means.

II.—PREGNANCY AND PARTURITION.

1.—*Kristeller, on the Mechanism of the Forceps—Operation.* (*Transactions of the Berlin Obstetrical Society. Monatsschrift f. Geburtsk.* xiii. 6 June, 1859).—Dr Kristeller, when speaking of the forceps, remarks that it consists of two two-armed levers, but both blades form, under certain conditions, only one single lever; it being at times a one-armed lever, at times a two-armed lever. In some instances the instrument does not work after the fashion of a lever, but only as a straight line, without any turning-point. This turning-point is situated at times in the lock, at times on the pelvic bones. The movements which we may effect with the forceps may be comprised under four heads. The most simple movement of the instrument is,

1. *The Pressure.* The blades of the forceps when locked represent two two-armed levers, which have their hypomochlion in the axis of the lock, and work in two opposite directions. The longer the handles, the more powerful is the pressure exerted by the blades upon the head of the child. The repeated use of one and the same instrument enables us to get acquainted with the degree of pressure which we have to make during a forceps operation. It is of practical value for the obstetrician to exercise on a dynamometer the force of pressure which he can produce with his hand on a certain point of his forceps. In the author's experience the pressure used in ordinary easy cases is from three to eight pounds; in more difficult cases from eight to fifteen pounds, and under more difficult circumstances, from fifteen to thirty pounds, and it must never exceed forty pounds in order to avoid the action of a craniotomy forceps. The pressure upon the head of the child ought not to be stronger than is required to prevent a sliding of the forceps. If we do more, not only the life of the child is endangered, but even the compression of the head in one direction is counter-balanced in its desired effect by the enlargement of its diameters in the opposite direction; thus the space gained in one way is lost on the other side. The author is of opinion that all the artificial regulations of the pressure, such as towels placed between the blades, or moving pins, invented for the purpose of avoiding too strong pressure, were more injurious than beneficial, inasmuch as the living hand is a much better regulator than all the best mechanical appliances. They prevent the obstetrician from lessening and increasing pressure in an equal degree with the force of traction applied.

2. *The Traction.*—Under ordinary circumstances the direction of the traction is that of the long axis of the instrument. But after the propositions of Osiander and Grenser for the delivery of a head floating above the pelvic entrance, the direction of the traction is a diagonal. Both proposed to exert the usual traction with the left hand, and a second traction from above downward, with the hand placed above or

below the lock, in order to prevent compression and injury of the perineum, to which it is liable under an operation performed in the usual way. The chief danger connected with this proceeding is the occurrence of the so-called parallel sliding of the forceps, because it is so very difficult to equalize both longitudinal and vertical traction of the instrument. One disadvantage of the promotion of the head by traction with the forceps is the fact, that the chin must naturally be removed from the chest, while, during a natural delivery, the occiput is the advancing portion. Although this unlucky occurrence is mostly prevented by the same circumstances which necessitate the application of the forceps to a head above the pelvic brim, it sometimes happens that this early promotion of the frontal part of the head entirely prevents a delivery with the forceps. An instance of this kind is mentioned by the author, where he at last had to place the patient *à la vache* and apply the forceps with its concavity being turned toward the os sacrum, in order to take hold of the occiput. It was a case of atonia uteri in a multipara, where the pelvis itself was of very favorable dimensions. This stretching of the head is of course only injurious with a head near the pelvic entrance; lower down it is the natural proceeding.

3. *Transversal movements.*—Transversal movements are called those which are performed by moving the handles from side to side or up and downward, or in a circular (rotatory) line. Under all these conditions both blades combined represent one one-armed lever, head and blades forming, as it were, only one part. The turning-point for this lever is situated on any point wherever the head is retained by the contracting space of the pelvis. If for instance the head is held back by the symphysis, this place will be the turning-point, for lateral as for vertical movements. In case of shortened antero-posterior diameter, the conjugate represents two turning-points with one axis for lateral movements of the forceps. In rotatory movements, the turning-points change their place. The danger of these transversal movements is their influence upon the occipital joint, which may prove dangerous to the life of the child, and upon the soft parts of the mother, which must be unavoidably injured and contused. These transversal movements have been proposed and executed by several accoucheurs with a view to imitate the natural movements of the head during its passage through the pelvis. But these spontaneous movements are of so complicated a nature and performed in such a harmless way that every attempt from our side to imitate nature by movements with our instruments must not only be an entire failure, but do more harm than good, both to mother and child. Only in those exceptional cases, where the pelvic contraction is confined to one diameter, these transversal movements may perhaps be of some service. The safest way to deliver a head is, therefore, a steady traction in one direction, and the transversal movements had better be dispensed with until certain rules for their application have been proposed and sanctioned by sound experience.

4. *Movement around the long axis.*—The purpose of this movement of the forceps is a turning of the fœtal head around its vertical axis. The best way to perform it is to seize the head in its lateral diameters and

combine a steady traction with the turning. This operation is performed for the purpose of remedying a wrong position of the head, and it certainly ought to be applied more generally than it is by our obstetric practitioners.

2. *Klaproth, case of ruptura uteri* (*Transactions of the Berlin Obstetr. Soc. Monatsschr. f. Geb.* xiii. 1, January, 1859).—Dr. Klaproth reports a case of uterine rupture in a woman who was in labor with her twelfth child. The head of the latter measured 26½ inches in circumference, and showed a hydrocephalic deformity. The rent ran through the lower section of the posterior wall of the uterus, in a diagonal direction, and seemed to be caused by the pressure to which part of the uterus was exposed, near the promontory, between this and the fœtal head. Dr. Martin said that the coincidence of uterine rupture with hydrocephalic degeneration of the fœtal head had been often observed, and perhaps the conclusion was justified, that the same cause which effected hydrocephalus, might possibly have an influence upon the uterine tissue, thus predisposing it to laceration.

3. *Murphy, E. W., report of a case of cæsarean section, with observations* (*Dub. Quart. Jour.* lii. February).—Dr. Murphy reports a very interesting case of acute halisteresis of the pelvis, which necessitated Cæsarean section. The mollities of the bones commenced during the pregnancy of 1856, which preceded this last one, about January in that year, but caused so little impediment, that the patient was able to go about until within an hour or two of her confinement, and then was delivered in two hours without the least difficulty. In October, 1857, she became again pregnant, and the pain and difficulty in walking, gradually increased so much that she was not able to leave the house, after January 1, 1858. The disease made such rapid progress, that the bone was in many places eaten quite through, the articulations destroyed, and the whole pelvis so brittle that the artist could not take a plaster of Paris cast of it. The contraction was such that the distance from the promontory to the pectineal eminence, on the left side was only 0.7 of an inch. Cæsarean section was performed in the University College Hospital, and the patient died on the fourth day after the operation, from metro-peritonitis. In his further remarks, Dr. Murphy cautions against unnecessary delay of the operation, as soon as the true state of things had been recognized. He mentions several cases where the women died undelivered, from non-observance of this rule. The author goes on to say that in order to appreciate the true position of Cæsarean operation compared to that of craniotomy, it would be unjust to make it out by a comparison of the respective statistics, because, while on the one side, the danger to the mother from gastrotomy is uniform, always present, that from craniotomy varies precisely as the degree of disproportion for which the operation is performed. Dr. Murphy contends that the frightful mortality of British patients compared to that of the Continent or America, was owing to hesitation before venturing on so bold a step. Still he places very little confidence in such statistical conclusions, but would rather seek to determine this very difficult question, by comparing case with case. When

discussing the question as to the degree of contraction which admits of craniotomy, Dr. Murphy reports the case of a woman with an antero-posterior diameter of an inch and a half, whom he delivered with perforator and crotchet. The woman died on the sixth day after the operation, without any appreciable cause. The case is well fit to illustrate the difficulties and dangers connected with craniotomy. As a comparison, the history of a Cæsarean operation reported by Mr. James Hawkins, of Newport, is given, which was performed in a case similar in most respects to the foregoing: both were rickets, one 4 feet 3 inches, one 4 feet 1 inch in height; the antero-posterior axis of the brim was in one instance an inch and a half; in the latter, an inch and three quarters. Both were in perfect health at the time of the operation; but here the resemblance ceased. In the case delivered by craniotomy, both mother and child were lost; in that delivered by Cæsarean section, both mother and child were saved. [There is only one drawback in the case delivered by craniotomy, which destroys the effect of the comparison entirely, viz.: every careful reader must come to the conclusion that the death occurring in the first case, had nothing to do whatever with the operation; the woman died rather suddenly from some cause unexplained, in the midst of full recovery.—E. N.]

Another case is reported from the practice of Dr. George Fox of Philadelphia, where a Mrs. R. had been delivered twice by the perforator in the hands of Dr. Meigs and twice by Cæsarean section. The patient recovered more promptly after the Cæsarean operations than after the perforations. The conjugate axis of the pelvis, in this case, was under two inches. A case of dystocia from a pelvic tumor, is reported, under the care of Dr. Shekleton, which represents the difficulties and dangers of perforation, which is followed by a case of Dr. Waller's, in which Mr. Le Gros Clarke performed the Cæsarean section, on account of a large tumor nearly blocking up the entire pelvic cavity. After the operation the patient was seized with a fit of coughing, in consequence of which the intestines were forced out *en masse;* the patient died after 48 hours. Mr. Poland performed Cæsarean section in consequence of the pelvic cavity having been completely filled by a scirrhous mass. The child was saved, and the mother recovered perfectly from the operation, but died some time afterward of the original disease.

Dr. Murphy goes on to enter his protest against a doctrine, which maintains that Cæsarean section ought to be performed with no other views than those relative to the preservation of the mother; and he holds it to be the duty of the practitioner, to make an effort to save the infant's life; the preservation of its life must be viewed as a solemn duty, when the risk to the mother, of craniotomy, equals, or *nearly* equals, the Cæsarean section. The author's want of faith in conclusions derived from statistics is founded on the fact that the number of Cæsarean operations performed in England is not sufficiently numerous to correct the errors produced by accidental causes, and that it is at present impossible to separate those cases in which craniotomy was performed in consequence of extreme disproportion in the pelvis from those in which the disproportion is only so great as to prevent delivery by the forceps. [And, after all, a final decision can only be arrived at eventually by statistics. At any rate, the few cases reported by Dr. Murphy not only allow of criticism with regard to their value, but even a writer who is of the opposite opinion may bring forth just as many and more cases to prove the contrary. On the other hand, we must admit that in order to arrive at a fair estimate, only those statistics are of value which refer to cases of craniotomy performed in consequence of *extreme* disproportion in the pelvis, E. N.]

The whole number of Cæsarean operations reported, the author places in the following tabular form:

Place.	Total Cases.	Mothers.		Children.		Observations.
		Living.	Dead.	Living.	Dead.	
Great Britain..	57	10	46	34	25	Cause of death in Mr. Whithead's case doubtful.
America.......	12	8	4	6	4	Two results not reported.
Europe........	409	158	251	237	110	Dr. West's table.
Total	478	176	301	277	139	

Report on Infantile Pathology and Therapeutics. By A. Jacobi, M.D., Physician to the Children's Department of the German Dispensary.

I. GENERAL PATHOLOGY AND THERAPEUTICS.

1. Politzer, L. M. *On Scientific Dietetics and Physical Education of Children.* Jahrb. für Kind. i., 3, 4.
2. Routh, C. H. F. *On Vegetable Substitutes for Human Milk.* Med. Times and Gaz., Aug. 21, 28, 1858.
3. Schöpf Merei, A. and Whitehead, J. *Second Report on the Hospital for Diseases of Children, at Manchester.* Journ. f. Kinderkr., 9, 10, 1858.
4. Routh, C. H. F. *On the Mortality of Infants in Foundling Hospitals, and generally as influenced by the absence of Breast-milk.* Brit. Med. Jour., Feb., 1858.
5. Helfft. *On the Mortality during the First Year of Life, of Children Born Alive at Berlin.* Monatsbl. f. Med. Statist., 2, 1858.
6. Raedell, C. *Contributions to the Statistics of New-Born Children at Berlin.* Ibid., 9.
7. Husemann, Th. *Contributions to the Medical Statistics of the Principality of Lippe.* Ibid., 1.

8. Scherzer, C. *Medical Notes.* Zeitsch. d. Ges. d. A. z. Wien, 45, 1858.
9. *The Hospital for Sick Children.* Brit. Rev., Jan., 1858.
10. Hauner. *Report on the Eleventh Year of the Dispensary connected with the Children's Hospital at Munich.* Ibid., 7, 8.
11. Schreber, M. *On the Therapeutical Effects of Sun-Baths, particularly in certain Chronic Diseases of the Infantile Age.* Jahrb. f. Kind., i. 3.
12. Tollard, J. *Use of Opium in Children.* Atl. Jour., Nov., 1858.
13. Politzer, L. *Critical Review of some opinions on Infantile Pathology and Therapeutics.* Wien Med. Woch. 47, 1858.
14. Schauenstein and Spaeth. *On the Transition of Medicines from the Circulation of Pregnant and Nursing Women into Milk, Amniotic Liquor, and Fœtus.* Jahrb. f. Kind.
15. Ploss, H. *On the Causes of Sexual Difference in Infants.* Mon. f. Geb., May, 1858. Repr.
16. Silvester, H. A. *A Contribution to the Science of Teratology.* Med. Chir. Trans., xiii.

Dr. Politzer tries to find a scientific basis of infantile dietetics, by investigating the peculiarities of the metamorphosis of the substances of the infantile organism, and the proportion of gain and loss, by exploring the exact nature and faculties of the digestive organs, and of the food most in use for children. In his opinion, metamorphosis of substance in the infantile organism, is particularly modified by the incompleteness of the body, and the chemical and physical difference produced thereby of infantile organs in proportion to those of adults. The osseous system, muscles, and skin, are most apt to show such a difference. There is another species of glue—cartilaginous glue—and less lime in the infantile bones than in those of adults, but more chloret. sodii, this having a greater affinity to the glue of cartilages; infantile muscles contain more albumen, less fibrin, and assimilate from the blood a larger amount of salts of potassa and magnesia than of lime; this forming no large part of the muscles, until a more powerful respiration, and a greater amount of oxygen in the blood favors the formation of fibrin. The skin, too, contains more albumen than in adults. Respiration is accelerated and less energetic, sleep of longer duration; according to the results of physiological science, therefore, less carbonic acid is exhaled, less urea excreted. Motions of the body are but few, mental activity inconsiderable. In the circulation, there are also some peculiarities, the heart being less powerful, and the "aspiring" effect of feebler inspirations on the venous blood less considerable. Nor has the relative inactivity of infantile muscles much effect on general metamorphosis. Milk undoubtedly changes the ratio of its elements according to the period of nursing, but not at all in such a degree as albuminous, fatty, and saline elements are changed in the food of adults. Finally, digestion, resorption, the size and influence of the liver, are of peculiar importance in the infantile organism. The practical consequences of the foregoing facts are easily understood: the assimilation of food will have more than only to restore the loss; it ought to be as digestible as its amount is sufficient; proteinates ought to outweigh fats; lime, potassa, phosphates, are required in large quantities, and the food ought to be equable and appropriate to the age.

The farther expositions of the author contain a full review of the physiology of the digestive organs, as applied to the infantile age. The organs of mastication, the stomach, intestines, liver, spleen, and pancreas, are treated of; the digestive power of the infantile saliva, gastric, pancreatic and intestinal juice, and of the bile, further the digestion of amylacea and carbohydrates, of proteinates, of fats, and finally, the process of resorption of the digested masses, are scientifically examined. Thus the physiological knowledge of infantile digestion, we may assert, is materially improved by the accurate and ingenious essay of the author.

Dr. Routh arrives at the following conclusions as to the diet of children: 1. The analogy of comparative anatomy of a child's alimentary canal, indicates that its food should be animal. 2. The child should not be weaned, if it can be avoided, before the eighth month. At this period it may be allowed to take vegetable food, but animal is better. 3. The vegetable aliment selected should contain chloride of potassium and phosphoric acid among its mineral ingredients, and a due proportion of plastic as compared with calorifiant matters; excess of starch being very difficult of digestion. 4. If pap be given, it should be made with milk, so as to include fat and chloride of potassium in the compound, and not given in large quantities; above all, it should not be made with white, town-made bread, which contains alum, and is nothing better than a slow poison. He expresses the opinion that, amongst the vegetable substances, that which comes closest to milk in its composition is, without doubt, lentil powder, or, as it is called for the purpose of obtaining a better sale, Revalenta Arabica, containing both phosphoric acid in abundance, and chloride of potassium; it also includes caseine, the same principle which is found in milk in its constituent parts. Moreover, its nutritive matter is to its calorifiant matters in the proportion of 1 to 2½, milk being in that of 1 to 2.

Drs. Schöpf Mereï's and Whitehead's report treats of 1,548 sick children attended during 21 months; its most interesting feature is the notes on the patients' mothers, residences and alimentation. On 722 children of from nine months to three years of age, whose nutrition and bodily development were accurately recorded, the following facts were obtained:

	The bodily development was		
	good.	middling.	bad.
I.—120 children were nursed by their mothers alone, without any artificial food, for 9 months or longer.	In 71 (60 p.c.)	31 (25 p.c.)	18 (14⅓ p.c.)
II.—68 were nursed by their mothers from 6 to 9 months exclusively, and were afterward partially fed with milk and bread, etc.	35 (51 p.c.)	20 (30 p.c.)	13 (19 p.c.)
III.—216 were not exclusively nursed by their mothers, but had artificial food intermixed from a very early date.	110 (51 p c.)	54 (25 p.c.)	52 (24 p.c.)
IV.—278 were more nourished by artificial food than by breast-milk.	80 (28 p.c.)	73 (26 p.c.)	125 (45 p.c.)
V.—40 were not at all nursed by their mothers, or for a very short time only.	4 (10 p.c.)	10 (25 p.c.)	26 (65 p.c.)

Of 1,548 sick children, 249 were suffering from troubles of the digestive functions, 116 from atrophy, 256 from weakness, 74 from rachitis, that is to say, 696 suffered in consequence of vicious alimentation; 93 died of this number. Of the whole number of 1,545, 117 died; 12 of them were from 3 to 14 years old; 105 under 3 years; 96 under 2 years; 47 under a year; 29 under 6 months.

Of 186	sick children	under 6 months,	died 29	12½ p.c.
" 195	"	from 6 to 12 "	" 18	
" 345	"	" 1—2 years,	" 49	14⅕ p.c.
" 220	"	" 2—3 "	" 9	4½ p.c.
" 602	"	" 3–13 "	" 12	2 p.c.
1,545			117	7½ p.c.

Two papers, read by Dr. Routh before the Medical Society of London, furnish the following statistics: The mortality amongst young children during one year, in Manchester, amounted to 55.4 p. c.; the corresponding figures for London being 40.2, for Leeds 52, and for Birmingham 50 p. c. in the same year.

In 1857, there died in London 363 children from "want of breast-milk;" and in seven years (from 1848 to '54) the number of deaths in all England due to this cause, increased from 393 to 842. Amongst the main causes of the large number of deaths occurring among young children, Dr. Routh counts the injurious excess to which wet nurses are employed, even such as are by no means able to nurse, and the bad quality of the milk, the sale of which ought to be regulated by the law.

The proportion of children dying under one year, to the whole number of the population of Berlin, according to Dr. Helfft, was in

1849	1 : 155.16
1852	1 : 139.62
1855	1 : 140.72

Of the children who died in the first year, 3.11 per cent. died within the first twenty-four hours; 23.75 from the second day to the end of the first month; 12.01 in the second month; 10.03 in the third; 9.47 in the fourth; 6.91 in the fifth; 6.87 in the sixth; 5.87 in the seventh; 5.32

in the eighth; 4.48 in the ninth; 4.18 in the tenth; 4.05 in the eleventh; 4.00 in the twelfth. Hence, the probability of life is increasing monthly, even daily. As a general rule, August was the most pernicious month at every age.

Dr. Raedell reports some statistical facts on the new-born children of Berlin, taken from the records of the years 1846–1855. The proportion of males to females is 1.0772 : 1. Of 23 new-born boys, 1 is still-born; of 25 girls, 1; of new-born infants in general, 1 is still-born out of 25. The temperature appears to have a great influence upon the sex of infants. The higher the average yearly temperature at the time of conception, the larger is the proportion of males to females. Conception in spring is more favorable to the female sex, conception in fall to the male. Temperature, finally, is not only of some influence upon the sex, but on the chances of living after birth also; a high average temperature at the time of conception (not of birth), appearing to augment such chances.

Dr. Husemann's accurate statistics are of great value. He shows, that of newly born children, in the principality of Lippe, from 3.3 to 4.27 per cent. die in the first six weeks after birth. Of the children, born alive, 15.54 per cent. will die under two years of age (in Belgium 29 per cent. according to Quetelet's reports); of the whole number of deaths 21.6 per cent. occur at this age. It is to be noticed, as a remarkable fact at once, that this rate of mortality has been about equal for the last seventy years. Of the whole number of deaths, 9.1 per cent. occur from two to five years of age; 5.12 per cent from five to ten years. This proportion was much more unfavorable in the periods of 1788–1807 (7.5 per cent.), and of 1808–1822 (5.7 per cent.), before and after the first introduction of vaccination. Of the whole number of deaths, 5 per cent. occur at the age of from ten to twenty years.

Dr. Scherzer states, that the mortality of children in China, is at least as high as in Europe, perhaps even larger. Variola and tetanus, dysentery and cholera, are frequent and very dangerous. Many cases of intermittent fever came under observation at the age of from eight to twenty years.

According to the Report of the Hospital for sick children, Ormond street, 1857, of the whole number of children of the better classes in England, from 25 to 30 per cent. die in the first ten years of life. Of the lower classes from 30 to 40 per cent., and as many as 60 or 70 per cent. under peculiar epidemical influences. Mortality among children at London, is but 2 per cent. less than fifty years ago. Of 50,000 deaths in London, 21,000 die under ten years of age; in the eight largest cities of Scotland, of the whole number of deaths, 46.5 per cent. occur in the first five years of life. In Ireland, 18 per cent. of the deaths occurred under five years of age, less in the conutry—in some counties 14 per cent. only—more in the cities; thus in Galway, 20; in Dublin, 20.2; Kilkenny, 20.3: Waterford, 21.5; Limerick, 22.1; Belfast, 22.7; Cork, 23.5; and Drogheda, 25.5 per cent. In France, of 100 newly born children, 20 males and 16 females will die in the first year, that is to say, a fifth part of the males, and a sixth of the females. In some of the English colonies, the rate of mortality is highly unfavorable; during the summer, at Melbourne, there are scarcely more births than deaths, in the course of six months, in 1853, the number of deaths was even twice as large as of births; in 1857, there were seventy deaths in children under a year, to 100 newly born children.

Some of the facts observed by Dr. Hauner are exceedingly interesting. For the months of September and October, 1856, similar weather and a like temperature prevailed; nevertheless bronchial affections were numerous, and very much so, in the course of October only. The temperature of October, 1857, was very much like that in 1856, but bronchial affections were very rare occurrences. Hooping cough was influenced, in 1857, neither by season nor by temperature; typhoid fever occurred in the same monthly number during the whole year, December excepted, where no case occurred. In February and March, without any particular changes in the atmosphere being observed, inflammations of the parotid were very frequent. Acute exanthems occurred in every month; and infantile cholera and slight dysenteries were observed as well in December as July. Dr. Hauner's therapeutical remarks are accurate, but naturally do not contain much that is new. Hooping cough was treated more successfully by narcotics, morph. aq. lauroc., extr. bellad., and in later stages by chin., lich. island., than by any other class of remedies. Diseases of the liver were sometimes found in post-mortem examinations, where they were very little thought of; fatty and nutmeg liver were the most frequent anomalies found, particularly in rachitical children suffering from dyspepsia and intestinal catarrhs. Dysuria was met with several times; in the majority of cases, the cause originated from the influence of cold, some of superabundance of uric acid. Incontinence of urine was observed in a boy of five years; the disease depended on weakness of the neck of the bladder, and was successfully treated by appropriate diet and posture, local application of cold, and cold hip baths. Diphtherite of the vagina was observed in a healthy girl of 1½ years; local application of nitr. arg., and the administration of the chlorate pot. proved successful. Fluor albus was observed in four little patients, who were cured by a general antiscrofulous treatment, baths of chamomile flowers—chamom. vulg.—and application of Goulard's water. A case of tuberculous inflammation of the petrous bone ended fatally, by tubercular disease of the brain. Rachitis will, in almost every case, be cured by cod-liver oil; iron, so highly recommended by some writers of Vienna, proved proportionately unsuccessful.

Dr. Schreber exposes children suffering from scrofula, atrophy, bad general development without a distinct organic disease, anæmia, flabby and pale skin, torpid tumors, osseous swellings, etc., to the sun, one, two, three times a day, keeping the child, the head covered, from ten to thirty minutes (having no fear of erythema) in a room, undressed (full bath) or half-dressed (half bath). He expects the sunbeams to enliven the peripheric nerves, both generally and locally.

Dr. Pollard advocates the use of opium in cautious doses, as he considers the objections to its administration in diseases of infants unwarrantably magnified by some writers. Generally opium is much dreaded in diseases of infants, for its dangerous effects on the cerebrum and meninges. We think it should be dreaded when given without strict indications, but will easily be tolerated whenever it is not applied unscientifically or wantonly.

Dr. Politzer has expressed, before a medical society at Vienna, his views on several important points concerning infantile pathology, of which we select the following: High rate of mortality is no physiological consequence of infantile nature, but is produced by accidental obnoxious incidents. On the contrary, circumstances are more favorable in infancy, the causes of diseases increasing in number and severity with advancing years, and the frequency of so-called infantile diseases being greatly overrated. Typhus, pneumonia, and morbilli give proof of the readiness of recovery in children; but diarrhœa is very dangerous. Diseases from teething and worms do not exist. Emetics and purgatives are much misused, so are leeches; opium requires great care and caution. Constitutional diseases ought to be treated in early age, and never overlooked indifferently; iron is especially indicated in the chronic form of rachitis; acute rachitis is frequently mistaken for some other trouble. Suppression of chronic exanthems is by no means dangerous; diaphoresis never ought to be resorted to for the purpose of reproducing an exanthem that has disappeared.

Dr. Schauenstein's and Dr. Späth's careful examinations have resulted in the following facts, viz., rhubarb was found in the breast-milk, sulphate of potassa was not. Iodine was proved to be present, after having been taken by pregnant and nursing women, in the meconium of the fœtus, in the urine, milk, and amniotic liquor during pregnancy. The chemical signs of mercury were not discovered with any degree of certainty.

Dr. Ploss, after reviewing former opinions on the subject, tries to arrive at a result from a great number of exact statistical reports. The principal conclusion he draws, and found very rarely refuted, is this, that the sex of the children born during a year is in a strict proportion to the dearth and consumption of bread and meat. The number of males will always increase with the scarcity and dearth of bread and meat, while in those years where these victuals are copious, the number of males is less. Such is Dr. Ploss' conclusion, arrived at, not only by statistical comparisons of different nations or districts, but of the same localities or populations in different years. It is to be kept in mind, however, that at all events the number of newly-born males is always and everywhere absolutely larger than of females, and that, therefore, the above stated conclusions must not be considered but in regard to the relative number of females and males.

Mr. Sylvester draws, from a large number of cases observed by him, a series of conclusions, of which the following are the most important: 1. The deformity appears to be the result of, first, the malformation of the germ; secondly, the subsequent deformation of the embryo and fœtus, by causes operating on its development: and, thirdly, by certain compensations and vital accommodations having a conservative tendency.

2. The arrest of development reacts on various parts of the body, and particularly on such parts as have either a casual or a natural connection with the original malformation. 3. The law of compensation prevails during the growth of monsters, consisting in a tendency to render the parts as nearly normal as possible, and to make up by excessive formation for the defective development of an adjoining part. 4. The several parts of the body are formed and developed independently of each other. 5. The muscles are directed to fixed points of attachment, and in the most nearly regular way possible under altered circumstances. When a bony insertion is unattainable, they unite together by their tendons; there is a vital accommodation to the exigency of the case. 6. The absence of the usual bony attachment, or the want of a firm point of insertion, exerts a material influence upon the development of a muscle. 7. The absence, or defective state of an organ, reacts unfavorably upon the formation of the nerves and vessels which supply it, even at a distance. 8. The deformity in the arm does *not* conform to the rule laid down by Rokitansky: "When the radius is wanting, the thumb and forefinger, with so much of the carpus as belongs to them, are wanting too."

II. DYSCRASIC DISEASES.

1. Heidenhain. *On Intermittent Fever.* Virsch. Arch. xiv. 5, 6.
2. Craig, J. W. *Cerebro-spinal meningitis, Brain Fever.* Buff. Med. Jour., July, 1858.
3. Avrard. *On Pernicious Intermittent Fever in Children.* Gaz. d. Hôp. 70, 1858.
4. Jones, C. Hansfield. *Malarioid Intermittent Fever in Children.* Brit. Med. Jour., July 31, 1858.
5. Joseph. *Case of Intermittens.* Virsch. Arch. xv. 1, 2.
6. Mall, J. *Typhus, with Secondary Croupous Inflammation of the Respiratory, Intestinal, and Vaginal Mucous Membranes.* Allg. Wien. Med. Zeitsch. 22, 1858.
7. Lebert. *New Investigations on the Pathological Anatomy of Abdominal Typhus.* Prag. Kertelj. 1, 1858.

Dr. Heidenhain gives, in an elaborate article on intermittent fever in general, his views and experience on what he calls convulsive intermittens, viz., such cases of intermittent fever in children as show no other prominent symptoms except convulsions, instead of the usual symptoms of fever. In the majority of cases only one side is affected; whenever both are, they are alternately. The attacks last for 4, 6, 8 hours, without dangerous results, or with paretic weakness or complete paralysis following. Sometimes in Heidenhain's experience, the child died in the second attack—always in the third. Death ensues with the symptoms and the pathological alterations of hydrocephalic apoplexy; the commencement of each attack resembling very much hydrocephalic apoplexy, and ending in sweating, with a large or slowly diminishing number of pulsations, and high temperature of the skin. The diagnosis is very difficult; the prodromi must be carefully weighed, and the epidemic genius considered. But it must be remembered, also, that hydrocephalic apoplexy is as common in spring as intermittent. Already, Gölis has spoken of an intermittent form of hydrocephalus; thus this disease, and tubercular meningitis, may be mistaken for intermittent fever. Dr. H. reports the case of a girl of 9 months of age, who went through a sudden attack of convulsions, returning about the same hour on the third day; the last attack appearing less severe than the first. Death ensued after 8 days had elapsed, and the post-mortem examination showed purulent arachnitis. During the convulsive attack nothing should be done; some good may be effected by cold applied to the head; leeches are always injurious.

Dr. Craig reports a series of cases occurring among adults and children, of meningitic symptoms invading suddenly and abruptly, with chills, followed by prostration, pain in the head and neck, and vomiting. The diagnosis was much more certain by a periodicity of the disease after it had existed for a few days. All of his cases, which were 129, 12 of which proved fatal, occurred at a time when there was a prevalence of miasmatic diseases, such as intermittents and remittents, of a persistence and severity before unknown. The whole course of the disease, and the success of the treatment by large doses of quinine and stimulants, proved the miasmatic origin of the disease. Death occurred in 5 cases within 36 hours; in 3 within one week, in 1 in the fifth week; in 1 in the eighth; in 2 after several months. The post-mortem examinations "revealed a softened condition of the base of the brain and upper portion of the spinal cord, with a very copious effusion of limpid fluid in the ventricles—in one case amounting to 8, in another to 12 ounces." Evidently, all these cases of Dr. Craig do not deserve the name of "cerebrospinal meningitis," as given by the author, but are cases of intermittent fever like those or Dr. Heidenhain.

Thus Dr. Avrard rightly answers the question put by Bouchut, is pernicious intermittent fever ever met with in infantile age? affirmatively; in declaring at the same time the diagnosis to be more difficult than in adults. Troubles of dentition or meningeal affections often give rise to mistakes. Two cases are given as illustrations.

Dr. Jones describes a morbid condition met with in children, not entirely corresponding with what is called remittent fever in adults. The children have been gradually losing health for several days or weeks; they are languid, drooping, emaciating, and, without appetite, more or less thirsty. The night is the time of most disorder; there is considerable cerebral disturbance; in some cases, also, copious perspiration. The children may be apyretic during the day, but become feverish at night. The bowels may be costive or much relaxed. The tongue is clean in some, in others coated. Quinine, in large doses, was found to be of decided curative efficacy. Cod liver oil and steel wine he also sometimes gave with advantage. He is much inclined to consider these fevers as of malarious character, and we do not perceive, indeed, why he should not, because, in the series of symptoms enumerated, the high nervous excitability of the infantile age taken in account, there is nothing that would not agree with the symptomatology of so frequently indistinct malarious processes.

A rare ingenuousness is exhibited by Dr. Joseph, in discovering a new variety of intermittent fever, viz., the "intermittent worm fever." A boy of 2½ years evacuated a large number of oxyuris vermicularis, after injections had been given; for three weeks he did not feel well, and finally had two severe attacks of daily intermittent fever. Dr. Joseph administered santonine, but without success as to the ejection of helminths. Finally, quinine was given, and the boy recovered rapidly. This was a case of intermittent worm fever in the opinion of the author; we are surprised at his naiveté, and see in the whole report nothing but a boy evacuating some innocent helminths, and suffering afterwards from the prodromi, and, finally, the attacks of intermittent fever.

Dr. Mall observed a case of abdominal typhus in a girl of 6 years of age, the complications of which are unusally interesting. On and after the eighth day of the disease, pseudo-membranes developed themselves in the mucous membranes of the nose, and extended into the larynx, mouth, œsophagus, stomach, intestines, and vagina. Local applications of borax and roborant remedies and diet formed the principal part of the treatment. The child finally recovered.

Of all the cases of abdominal typhus recorded by Prof. Lebert, ten per cent. occurred in individuals under fifteen years of age. In this early age intestinal affections were little or not at all discovered. The examination of a girl of fifteen years, who died after the fourth week of the disease, resulted in the following facts: Meninges and brain contained a moderate amount of blood, the ventricles little serum. Lungs were full of blood, otherwise normal; in the heart, black and fibrinous coagulations were found; the liver was normal, the spleen very much enlarged, seventeen centim. long, eight broad, and three and a half thick; it was soft and dark; kidneys and mucous membrane of the stomach normal; mesenteric glands somewhat swelled; the small intestines were nowhere ulcerated, Peyer's glands slightly swelled, some small sugillations near the cœcum; solitary glands normal. The mucous membrane of the large intestines were nowhere softened nor swelled, but generally very hyperæmic. Another child, feeble and emaciated, left no pathological signs. A third patent, already recovering, was affected with peritonitis of the right side, and died twelve days afterward. The fundus of the gall-bladder was perforated and surrounded with a purulent peritoneal exudation. In the dilated gall bladder there were some ulcers of diphtheritic appearance, ductus choledochus was obliterated, probably in consequence of ulcerous inflammation of the dilated gall-bladder. In general, the results of Prof. Lebert agree with those of Dr. Friedrich, who has proved alterations of the intestines and pathological changes in general, to be by no means frequent in abdominal typhus of the infantile age. Besides, it is well known, that Drs. Rilliet and Barthez have found resolution of the swelled glands of Peyer to be not an uncommon process even in a stage of the disease where ulceration is going on actively.

PRACTICAL MEDICINE.

Tannin in large doses in albuminous anasarca. (*Archi. Gén. de Méd.*)—The conclusions drawn by Dr. Gardner are that tannin, employed in doses of two to four grains a day (ʒss. to ʒj.), cures anasarca or œdema developed passively, and occurring simultaneously with albuminous urine; that its curative action is manifested by abundant urine, gradually resuming its physiological characters, by perspiration, easy alvine evacuations, return of appetite, etc.; that these signs appear from the second day of the administration of the tannin; that given in solution of doses from twenty to fifty centigrammes at a time, tannin causes no unfavorable symptoms affecting the digestive passages; and lastly, that the action of tannin appears to be exerted primarily upon the fluids of the economy, the albuminous principles of which it coagulates and renders plastic, and that its consecutive action on the solids appears to be tonic and astringent.—*Med. Chir. Rev.*

Veratria in acute diseases of the chest. (*Bull. Gén. de Thérapeut.*)—The dose of veratria is five millegrammes (.077 of a troy grain) in a pill with the same quantity of opium, and the number of pills to be taken in the twenty-four hours varies from six to seven, and even twelve, according to the circumstances. In this dose, according to M. Ghiglia, vomiting rarely occurs, but nausea and the other depressing effects of veratria are present. The results obtained by M. Ghiglia in certain cases of pneumonia, bronchitis, and broncho-pneumonia have been sometimes most remarkable, but have been occasionally unfavorable, and the following are the results arrived at by this author: "1. The inflammation of the respiratory organs, when they have arrived at such a period as to produce disorganization of the parts, are not improved by the use of veratria. 2. The action of this substance is the more favorable in proportion as the disease is more recent. 3. The tolerance is very various, according to individual habits, and perhaps also according to certain peculiarities which are not yet well understood. 4. The more easily the tolerance ceases the more marked is the depression. 5. Veratria is in many respects a preferable medicine to others which are more constant in their action but less easy to take. And 6. It is, perhaps, prudent, in severe inflammations of the respiratory organs, to order a few bleedings before prescribing the veratria.—*Med. Chir. Rev.*

A case of scrofula cured by iodized food. (*L'Union Médicale.*)—The patient had been subjected for five or six years to active treatment, consisting of bitter infusions, iodide of potassium, and cod-liver oil, purgatives, blisters, and salt-water bathing, but without any good result. At last, M. Jobert had recourse to the use of *iodized bread*, as recommended by M. Boinet, and omitted all other medical treatment. From the period of the adoption of this plan a favorable change in all respects was observed in the patient, and after he had eaten the medicated bread for eight months, he could scarcely be recognized.—*Med. Chir. Rev.*

Chlorate of soda in mercurial stomatitis. (*Gazette Médicale*).—From the experiments which have been made on the use of the chlorates of potash and soda, it appears that the action of these salts depends more upon the acid than upon the base, but that the greater solubility of chlorate of soda and its less marked taste ought to give it the preference. M. Mussat employed the chlorate of soda in six cases of stomatitis with very favorable results, and the patients stated that this salt had a less disagreeable taste than the chlorate of potash.—*Med. Chir. Rev.*

Efficacy of sulphate of copper in exciting vomiting in the treatment of croup. (*Bull. Gén. de Thérapeut.*)—Dr. Missoux, after a practice of eighteen years, states that the sulphate of copper has been, in his hands, the most successful emetic agent in the treatment of croup. Its purifying action appears to him the more valuable, because diphtherite (croup) at its commencement is often localized in the throat, and by applying remedies early, the extension of the false membranes to the larynx may be prevented. For young children he dissolves a quarter of a gramme of the salt in 125 grammes of distilled water, and orders a teaspoonful to be given every ten minutes, until vomiting is produced.—*Med. Chir. Rev.*

Croton oil as a counter-irritant in hydrocephalus. By John Watson, M.D.—C. B., aged two years, a strumous-looking child, came under my notice for eczema of the scalp. The eruption, which was general and attended with copious discharge, got well under ordinary treatment. A few weeks afterward, he had an attack of acute hydrocephalus. Leeching, cold lotions to the shaved head, calomel, and antimony, etc., were immediately resorted to, but unavailingly: for the second stage of the disease came on. He now lay semi-comatose, with the neck extended, the eyes half closed, and the pupils dilated. The pulse also had become slow and irregular, the respiration frequently interrupted with a sigh, and he had strabismus occasionally. A blister was now applied behind each ear, with no effect. Thinking it possible for his present attack to be connected with the previous condition of the scalp, as a means of best imitating the eczematous eruption, the croton-oil suggested itself. With the sanction of the gentleman who was attending with me, I directed the croton oil liniment (croton oil, half a drachm; turpentine liniment, half an ounce) to be rubbed over the entire head every four hours till a plentiful crop of pustules should make their appearance; after which we soon had an amelioration of all the symptoms, and he gradually became convalescent, though he was unable to speak for several days, and could not stand alone for a considerable period.—*British Med. Jour.*

Traumatic diabetes.—Dr. Plagge reports a case brought on in a young man by a blow on the occiput, which, besides a swelling, seemed to produce no effect. In two or three days, however, the youth was seized with amblyopia, thirst and craving for food, while he passed a large quantity of urine which yielded much sugar. There was no uneasiness about the liver, nor jaundice. Tannin and opium together, with flesh diet, were prescribed during a week, with little effect, three or four quarts of urine being passed daily. Under the use of bicarb.

of soda, with flesh diet, however, the sugar gradually disappeared from the urine, although this fluid continued to be passed in too great abundance, as simple polyuria, for two months longer.—*Virchow Archiv.*

Chloroform in traumatic tetanus.—Dr. Taramelli relates the case of a woman, aged 36, who was brought into the Milan hospital, on the 6th of October, on account of lacerated wounds. On the 22d she was seized with symptoms of tetanus, which soon assuming an important character, she was ordered chloroform inhalations six times per diem, without much amelioration until the 5th November. The chloroformizations were then repeated only four times, and after a while, three times, and twice a day—the whole quantity of chloroform consumed amounting to eight ounces, of which some was lost during its administration. She completely recovered.

Acetate of lead in pneumonia.—Dr. Brandes, of Copenhagen, has recently strongly recommended the treatment of certain cases of pneumonia by acetate of lead—not as an exclusive method, however, for other means, as expectoration, bleeding, etc., all have their proper indications. Generally, bleeding is to be avoided in enfeebled or anæmic subjects; and in these cases Dr. Brandes gives the acetate, generally uniting it with quinine (āā gr. j. alternis horis), or when the cough is very troublesome, substituting opium for the quinine. In young children it has also been found of advantage, half a grain being given as a dose to children from one to eight years of age.—*Presse Belge.*

Mastic in nocturnal incontinence of urine.—M. Debout recommends the following formula:—Tears of mastic, ℥viij., simple syrup q. s. to form into 64 pills; or if the child swallows badly, the mass may be divided into 128 pills, or the mastic may be made into an electuary with honey. However this may be, if the child is more than ten years old, it must take the whole quantity in four days, *i. e.* ℥j. morning and evening, two hours before or after a meal. For younger children the dose is diminished, so as to extend the ℥viij. over six or eight days. If a cure is not operated by the first batch, a second must be given in the same way, but there is no use in going on further. In more than two-thirds of the cases in which it has been used, the cure has been complete, and that in persons from 18 to 24 years old, who had suffered from the affection from infancy.—*Bull. de Thérap.*

Skoda's formula in scorbutus.—Professor Skoda, of Vienna, employs the following preparation with advantage, associating it also with the other means generally had recourse to: Decoct. of malt with fir sprouts 275, yeast 25, and syrup of orange peel 25 parts; a tablespoonful every two hours.—*Ibid.*

Assafœtida and aloes in ascarides.—Dr. Nathaniel Smith states that he never fails to remove ascarides with this remedy. He uses the tincture.—*Boston Journal.*

SURGERY.

Removal of rings from swollen fingers. By E. Garraway, Esq.—The mode of proceeding is this: A reel of cotton is wound evenly round, beginning on the extremity of the finger and bringing each coil into close apposition with the preceding, until the ring is reached. A needle is then threaded with the cotton, and passed under the ring, and the thread is carefully unwound from the finger. The ring follows each coil as it is successively unrolled, and by almost imperceptible degrees is brought over the knuckle and removed. Care must be taken that the cotton is wound on evenly, particularly over the protuberant and swollen knuckle, or an entanglement will occur in the unwinding. A small curved needle will pass more rapidly under the ring than a straight one. —*British Med. Jour.*

Analysis of 186 *lithotomy operations.*—During the three years and a half over which our statistical reports extended, 186 cases of lithotomy were recorded as occurring in the different metropolitan hospitals. It this appears that an average of 40 patients a year are operated on for stone in the bladder, or, in other terms, not quite one a week. Of the 186 cases, 146 resulted in recovery, and 40 ended in death. Of the whole number, 137 were under the age of 20, and of these 123 recovered and only 14 died; while, of the 49 in which the patients were adults, we find but 23 recovered, and no fewer than 26 died.

Children under the age of 5 appear to bear the operation not so well as those a little older, since of 48 operations, 1 case in 9 ended in death. If we pass by the fact that no death appears to have occurred out of the 7 cases between the ages of 15 and 20, as probably (on account of the smallness of the number) a coincidence, we may allege that amongst adults the rate of mortality rises with the age of the patient. Of those under 10, only 1 death in 13.6 cases occurred; in those between 10 and 25 the rate has risen to 1 in 5; in those between 25 and 56 it has reached 1 in 2; between 45 and 60, it is actually more than half; while subsequent to the age of 60, it attains the frightful proportion of 3 in every 4.

Causes of death after lithotomy.—Renal disease, in 14 instances; hemorrhage, 4; pyæmia, 4; peritonitis, 4; shock of operation, 2; extravasation of urine, 2; abscesses about the bladder, 2; wounds of the fundus of the bladder by the knife, 2; exhaustion, 1; convulsions, 1; cystitis, 1; bronchitis, 1.—*Med. Times and Gazette.*

Statistics of lithotomy.—The following general results are obtained from an interesting series of tabulated cases, which have occurred in the Glasgow Royal Infirmary. Lithotomy has been performed in the male in 159 cases, with 23 deaths. Proportion of deaths to cases, 1 in 6.913. The ages of the patients, and results, are as follows: At and under 5 years, 50 cases, 3 deaths; from 5 to 10 years, 34 cases, 2 deaths; from 10 to 15 years, 11 cases, 1 death; in all under 15 years, 95 cases, 6 deaths. Proportion of deaths to cases under 15 years, 1 in 15.83. From 15 to 20 years, 14 cases, 5 deaths; from 20 to 30 years, 15 cases, 5 deaths; from 30 to 50 years, 14 cases, no deaths; above 50 years, 14 cases, 3 deaths; in all above 15 years, 57 cases, 13 deaths. Proportion of deaths to cases above 15 years, 1 in 4.384. The ordinary lateral operation, in one or other of its modifications, has been performed 107 times, with 18 deaths. The operation with a rectangular staff, devised by Dr. A. Buchanan, has been performed 52 times, with 5 deaths. The following are the particulars of the cases which were treated by the two methods respectively:

The ordinary lateral operation occasionally modified to suit particular cases, as noted in the table.—At and under 5 years, 28 cases, 1 death; from 5 to 10 years, 24 cases, 1 death; from 10 to 15 years, 7 cases, 1 death; in all under 15 years, 59 cases, 3 deaths. Proportion of deaths to cases, 1 in 19.6. From 15 to 20 years, 9 cases, 4 deaths; from 20 to 30 years, 12 cases, 4 deaths; from 30 to 50 years, 9 cases, no deaths; above 50 years, 11 cases, 3 deaths; in all above 15 years, 41 cases, 11 deaths; proportion of deaths to cases above 15 years, 1 in 3.727.

Dr. A. Buchanan's rectangular method.—At and under 5 years, 22 cases, 2 deaths; from 5 to 10 years, 10 cases, one death; from 10 to 15 years, 4 cases, no death; in all under 15 years, 36 cases, 3 deaths; proportion of deaths to cases, 1 in 12. From 15 to 20 years, 5 cases, 1 death; from 20 to 30 years, 3 cases, 1 death; from 30 to 50 years, 5 cases, no death; above 50 years, 3 cases, no death; in all above 15 years, 16 cases, 2 deaths; proportion of deaths to cases above 15 years, 1 in 8. In 7 additional cases of the lateral, the ages are omitted from the record; of these, 4 died. Proportion of deaths to total cases, lateral, 1 in 5.94; rectangular, 1 in 10.4.—*Glasgow Med. Jour.*

Analysis of 177 lithotomy operations.—In our January number for the present year, we entered into a statistical analysis of the lithotomy operations performed in the different metropolitan hospitals during a period of three years and a-half. We now undertake a similar task as regards such of the larger of the provincial hospitals as have furnished us from time to time with the necessary data. In the present instance, the period included is from October, 1853, to December, 1858, or four years and a-quarter. The London list comprised a gross total of 186 cases, with 40 deaths; while the provincial will show 175, with 22 deaths.

Influence of the patient's age on his prospect of recovery.—In the practice of our provincial hospitals the period of life in which the lowest death-rate after lithotomy prevails is between the ages of 5 and 10. Of fifty-five operations performed on patients between these ages all but one resulted in recovery. Children under the age of 5 do not appear to bear the operation so well as those a little older, since out of 41 operations we have 5 deaths. In the periods between the age of 10 years and puberty, and from the latter to 25, the mortality is much larger than in childhood, and it rises still higher during the twenty years next following, to decline however, with further advancing age.

Causes of Death.—Peritonitis in 6 instances; abscesses about the bladder in 4; hemorrhage in 3; pyæmia in 2; shock of the operation in 2; renal disease in 2; extravasation of urine in 2; exhaustion in 2; broncho-pneumonia in 1.—*Med. Times and Gaz.*

Operations for stone in women.—We have 24 instances of operations for stone in the female bladder. Of these, 16 occurred in the practice of metropolitan hospitals, and 8 in that of provincial institutions. Of the whole, 22 cases resulted in recovery, and in 2 the patients died. In both the cases which ended fatally the patients were adults, who had suffered from stone from early childhood, who were worn out by the irritation, etc., produced, and in whom the stone was of very large size.

Age at which stone is most frequent in females.—In employing our series of cases to determine the age at which vesical calculus most frequently occurs in the female sex, 5 cases must be excepted. In two of those the concretion had formed on hair-pins intentionally introduced into the urethra, and in the others it was consequent on certain injuries to the vagina to which the adult only is exposed. Taking, then, the remaining 19 cases as our basis, we find a remarkably close correspondence between females and males, in the period of life most liable to idiopathic vesical calculus. In 6 of the cases, the patient was under ten years of age; in 4 between ten and twenty-five; in 5 between twenty-five and forty-five; and in 4 between forty and sixty.

Fatality of operations for stone in the female.—We are not aware that any statistical data have yet been collected respecting the proportion of deaths which occur after the removal of stone from the female bladder. The list before us gives two deaths to twenty-four cases, or one in twelve. This rate of mortality is, we fear, not at all above the true average.—*Med. Times and Gaz.*

Iron-thread in vesico-vaginal fistulæ.—Since last autumn Professor Simpson has operated on fourteen cases of vesico-vaginal fistulæ. The last two are proceeding favorably in all respects, but the operation in them is too lately done to admit yet of perfect certainty as to the ultimate result. Out of the remaining twelve, in three the operation was only partially successful, and will require to be repeated a second time. In the remaining nine the fistulæ were closed by the first operation. Dr. Simpson has always used the common blue, annealed, iron-wire (No. 32 of the iron-monger's gang) as his suture-thread. In his last six cases he has dispensed with the assistance of all clamps, buttons, or splints, and has merely brought together the vivified edges of the fistulæ, some of which were very large, with deep and closely-placed stitches of the iron-thread. All of these six cases have proved successful. The two cases at present under treatment have been operated on in the same way.

Manual compression in the treatment of aneurism.—Vanzetti observes that since his visit to Dublin, in 1843, when he had the opportunity of observing the inconveniences attendant upon the production of compression by the aid of mechanical appliances, he has had in view the desirableness of substituting the action of the hand. It was not until 1853, however, that he first practically realized the idea. A mason presented himself with a popliteal aneurism the size of an orange, and after he had been prepared by rest, diet, and nitre drinks, he was taught how to compress the femoral artery, and was directed to do this several times in the day. At the end of a fortnight, the compression was kept up more methodically, being continued, at intervals, so as not to weary the patient, for at least two hours at a time. Solidification then took place at the end of forty-eight hours. The tumor disappeared rapidly, and the man has continued well since. The second case occurred in the person of an officer of the Chasseurs, the popliteal aneurism being as large as a lemon. Having employed occasional compression of the femoral at home at intervals during a month, he came to the hospital, and then five hours' continuous compression, kept up by the pupils, secured solidification. He is now on duty in the army. Case 3. A woman, aged 38, was admitted into the Padua Clinic, with a frightful protrusion of the left eye, this having originally commenced during the throes of labor. As all the symptoms of aneurism of the ophthalmic artery were present, compression of the left carotid was put into force. The intervals were very short, for if continued for more than a minute, the pressure produced faintness. After four days all sounds and pulsation had ceased, and a few days later the eye reassumed all its normal character. 4. The next case was an aneurism at the bend of the elbow, under the care of Professor Gherini, of Milan; and manual compression of the brachial produced solidification in three and a half hours. 5. Dr. Gelmi, of Verona, treated a case of popliteal aneurism by means of pressure of the femoral, first for two or three hours, and then for one or two hours per diem; and by the twentieth day the leg had resumed its normal condition. 6. A patient came under Professor Riberi's care at Turin, with an aneurism at the lower third of the femoral, and which had ensued on a fall. Four hours' compression produced the necessary solidification. 7. In the case of a woman who suffered from protrusion of the eyeball, dependent on aneurism, compression was made on the carotid during five minutes, five or six times in the twenty-four hours. On the seventeenth day, and after 440 minutes of compression, all appearance of projection had been removed.—*Med. Times and Gaz.*

The flexion treatment of popliteal aneurism.—The new method of treating popliteal aneurism by bending the knee and retaining it in that position, as adopted with success by Mr. Ernest Hart, and subsequently by Mr. Shaw, does not seem to have been productive of good results in the few cases in which it has as yet been tried in the London hospitals. In a case under the care of Mr. Moore in the Middlesex Hospital the aneurism, which was an unusually large one, gave way into the joint during treatment by flexion. That the position mentioned might easily increase the liability to such an occurrence may readily be conceived, more especially when the aneurismal sac is placed on the articular aspect of the artery. Mr. Moore's patient, despite the formidable complication alluded to, made a good recovery after ligature of the femoral, and the effused blood was absorbed from the joint without causing any material irritation.—*Ibid.*

On the treatment of empyema by "drainage." By S. J. Goodfellow, M.D.—The operation is very simple. A puncture with a trocar, or simple incision, may be made into the cavity of the chest at the usual place—between the fifth and sixth, or sixth and seventh ribs—or, indeed, in any convenient situation. A firm long iron probe, somewhat bent, is then passed through the opening, and directed toward the lower and back part of the cavity—the lower the better. If the end of the probe be made to press against the sides of the thoracic walls, it can be felt from the outside through the intercostal spaces, though, perhaps, obscurely, owing to the thickness and toughness of the false membrane within. The lowest and most appropriate site in which the probe can be felt having been selected, an incision is made upon the end of the probe, which is then brought through the opening thus made. A strong piece of silk thread is passed into the eye of the probe, and drawn through the two openings; and the drainage tube, being firmly tied to one end, is then drawn through by means of the silk; the ends of the tube are tied together, and the operation is completed.—*British Medical Journal.*

Cure of hydrocele by introduction of hydrarg. nitrico-oxydum. By William Hepworth Radley.—The method of introducing the powder is as follows: Having extracted all fluid by tapping in the ordinary way, the only precaution that is necessary being to use a moderate-sized trocar, grease the end of a probe, the blunt end being preferred, and dip it lightly into some of the hydrarg. nitrico-oxydum finely powdered; then introduce through the canula into the sac of the tunica vaginalis; next feel for the end of it through the scrotum; nip the scrotum together, having the probe between the two portions, and withdrawing it, the powder will be left in the cavity. A repetition of the above once or twice will be all that is necessary.—*Med. Times and Gazette.*

Tracheotomy.—Mr. Skey made the following remarks: Tracheotomy is not an operation very easy of performance, and the less so when undertaken on a child by gaslight. It is desirable to dissect in the exact mesial line, not merely to avoid injury to the sterno-thyroid muscles, but to maintain a clear knowledge of the precise locality of our dissection. The operation of tracheotomy, when undertaken for the removal of a foreign body, is essentially different from that performed for the admission of air to the lungs. The required opening in the latter case is small. In the former, it must be large, and inasmuch as when it is undertaken for the removal of a foreign body, it is usually performed on the persons of young children in whom the trachea is short, the opening made should involve nearly the whole of the tube, from the cricoid cartilage to the upper border of the sternum. The division of the thyroid isthmus in the child is of no moment.—*Ibid.*

CORRESPONDENCE.

Removal of loose cartilage from the knee-joint, by direct incision.—Recovery. By F. A. BURRALL, M.D., formerly House Surgeon to Bellevue Hospital, one of the attending surgeons to the Northern Dispensary.—In the early part of March, 1859, Michael Clear, an Irishman, aged 25, a laborer, presented himself at the dispensary, with an affection of the right knee, which he termed "a lump" in the joint. He stated that ever since a fall upon the right knee, which occurred nine years ago, the joint had been the seat of uneasy sensations, and painful twitchings upon its outer side. Two months since, while making boilers, an occupation which required a constant up and down movement of the knee, he felt a sudden pain in that part, which obliged him to discontinue his work. He afterward discovered the "lump" lying loose in the articulation, displaced, as he supposed, from under the knee-pan.

The patient is of healthy parents, and has suffered scarcely at all from any previous disease. He is of a nervous temperament, and has a cheerful disposition. The joint differs in appearance very little from its opposite fellow, except that a slight effusion has given it a rounder look, and there are still the faint remains of an eruption upon it, which has followed the application of some external irritant. Manipulation detected a loose body about as large as, and similar in feeling to, a Lima bean, easily movable about the joint, and when in certain positions rendering the patient comparatively helpless, and causing acute pain.

Dr. Buck was consulted in reference to the case, and gave it as his opinion, that as an operation was the only remedy, it would be better to remove the cartilage by a subcutaneous incision of the synovial membrane, although the good health of the patient would justify its direct removal.

March 12.—Drs. Bumstead and Hinton were present, and assisted at the operation. The cartilage having been pressed up into the outer part of the joint, about an inch above the external condyle, and half an inch external to the outer border of the patella, a tenotomy knife was introduced horizontally, about an inch above the cartilage, pushed down to it, and moved upon it backward and forward, making a grating noise. Efforts were then made to push the body into the cellular tissue, but during these it slipped and could not again be found. It was supposed by the physicians present, as well as the patient, to have slipped out of the joint, and further manipulations were considered unadvisable. A drop or two of blood followed the wound, which was carefully closed with collodion, and the joint having been placed upon a double inclined plane at a very obtuse angle, cold cloths were at once applied to it.

No constitutional excitement of any importance followed the operation, but on the ensuing Monday the cartilage was detected after a thorough search, still lying in the joint. A second operation was proposed and assented to, and on March 19, the cartilage having been pressed high up into the joint just external to the extensor tendon, and firmly held by Dr. Bumstead, an incision was made directly upon it, just large enough to allow its emergence. A hook was inserted into it, after its exposure, and with some difficulty it was drawn from the joint, closely followed by the fingers. About a drachm of blood escaped from the wound.

The limb was again placed in a similar position to that occupied after the first operation, and cold dressings were again applied. The removed cartilage resembled a Lima bean very much in size and shape, showing on one side commencing ossification.

There was very little constitutional excitement until the Thursday after the operation, when acute pain down the limb, which lasted several hours, with a pulse of 120, was followed by a discharge of old blood, and a gelatinous substance which had filled the wound. This was succeeded by the flow of a pale yellowish fluid, containing flocculi, which continued several weeks, and seemed to proceed (partially at least) from a subacute inflammation of the tissues about the joint. The discharges were not examined by any chemical tests. A dusky spot, pitting on pressure, appeared over the inner hamstring at the commencement of the discharge, but gradually passed away.

Passive motion was commenced on the 30th, and on the 18th April the limb was straightened to its entire length. Dr. Foster Swift kindly took charge of the case at this time, and under his judicious care, convalescence was established. The patient was on his feet about the close of April, and soon regained perfect use of the limb.

I have thought it unnecessary to detail the steps of the after treatment. It consisted during the early stage, of rest upon the double inclined plane, the constant application of cold dressings, and the administration of opium, with an occasional use of stimulants. Liniments, strapping, and the cold douche were resorted to after the inflammation had begun to become chronic. The main seat of the inflammation seemed to be in the tissues about the articulation, and to be held in check outside the joint by the steady use of cold applications. The patient's room was on the highest floor of a tenement house near the North River, and the opportunities for ventilation were better than is usually the case among dispensary patients. The pulse, as a general rule, varied in frequency from 90 to 100, reaching 120 only during the severe pain which preceded the discharge, and was quite compressible. It gradually fell to its normal standard as recovery approached.

Cases of amputation. By Rufus H. Gilbert, M.D., of New York.
(*Continued from page* 138.)

Case 2.—Amputation during spreading gangrene—Recovery.—H. S., aged 21, of Hornby, N. Y., while engaged driving upon an eight horse power threshing-machine on the 19th of Dec., slipped from his position so that his left leg was caught above the ankle, between the -arm of the wheel under him and the frame, crushing the shafts of the tibia and fibula into fragments, and severing the soft parts completely, with the exception of the tendons, which were drawn out like *whip chords.*

I saw him three hours after the accident. There had been, from the nature of the injury, but little hemorrhage. Stimulants had been taken before, and were administered after the accident, and reaction had taken place sufficiently to admit of amputation, the only thing to be done, but which he utterly refused, "preferring to die with his mangled limb" rather than submit to an operation.

Prevented thus by the patient from doing for him as the case required, I had only to place the limb in a fracture-box and wait a change of decision, which took place upon the appearance of gangrene in the sound parts above the injury, and which, showing no disposition to limit itself, swung the pendulum of his feelings quite as much in favor, as it had been against an operation.

It was not so favorable a case now for the amputation. The poison of the dead parts being absorbed, had produced great general depression, in addition to the severe erysipelatous inflammation which followed up along the line of the vessels. For the relief of this, tincture of iodine and creosote with chloride of soda were used locally, with some effect, but the patient's strength failing under its severity, and believing that further delay would increase the risk, and deprive him of the only remaining chance, I determined to operate at once. Accordingly, on the 31st, eleven days after the accident, the patient was placed under the influence of chloroform, and assisted by Doctors Shannon and Terbell, I proceeded to amputate the limb, after the flap method of Fergusson, at the tuberosity of the tibia. The vessels were readily secured, and the stump was allowed to remain open and dependent for some minutes, to test their strength, and to reveal any others that might have escaped notice. The flaps were now painted with strong tincture of iodine, and dressed with sutures and straps of adhesive plaster in the usual manner. Upon moving the patient from the table to the bed, we were surprised by a profuse hemorrhage from the stump, streaming through the dressings. It was immediately controlled by pressure upon the popliteal artery. At a loss to know the cause, I was fearful that the *vessels* might be diseased; but upon opening the stump, it was found to proceed from an abnormal division of the artery or arteries escaping notice, probably from the branch being filled from its bifurcation with a plug of coagulated blood. After it was ligatured, and the parts redressed, there was no further trouble from hemorrhage, nor was there subsequently sloughing of the flaps, but rather a speedy union, nearly by the first intention.

He improved rapidly, with the use of tinct. ferri and a generous diet, and was discharged cured, on the 23d of January.

Case 3.—Amputation of the thigh, hemorrhage from the osseous artery, and erysipslas following the operation.—The patient, Miss ——, aged 14, of a scrofulus diathesis, three years previous had received a fall upon the knee-joint, which was followed by acute synovitis, the result of which was destruction of the joint, and an inflammation of the substance of the femur, extending up the middle of the shaft, and accompanied by enlargement of the bone, and great thickening of the periosteum.

On the external aspect of the thigh there were three fistulous openings, through which was discharged a mixed and variable pus, sometimes dark and offensive, at times spicula of bone, and on several occasions, occurring with some regularity, it had been tinged with blood, which, it was thought might be vicarious menstruation.

With one whose health and constitution were so seriously impaired, an operation was a formidable alternative, but one which, in any event, a hope of relief from pain, and a preconceived idea that it alone would be the means of saving her life, made her favor its adoption.

In this as in the preceding cases, chloroform was administered, without any but good effects, five drachms being required to produce insensibility. The amputation was then performed at the junction of the middle with the upper third of the femur. On sawing the bone it presented so diseased an appearance, it was thought desirable to go higher up; this resulted unexpectedly in a division of the osseous artery, which bled freely. Failing to stop the hemorrhage by ice, it was controlled by the actual cautery, after a second application. I should not hesitate on another occasion to use in place of the latter, a plug of wood, as being more expeditious and certain, and seeming less barbarous.

Although the patient had borne the operation very well, still there was great prostration after it, and brandy was required for the next thirty-six hours, at short intervals, to prevent her sinking. The low state of her general health, with impaired vitality of both nerves and bloodvessels, were conditions favorable for erysipelas, that dreaded foe to success in operative surgery; my fears were realized. At the end of forty-eight hours it attacked the stump, showing itself at first in a livid spot, about two inches in diameter, and spreading rapidly after the removal of the dressings, over the stump, up the thigh, and three or four inches on the trunk, accompanied with swelling, and a mottled, glistening appearance of the skin. A profuse, thin sanious discharge, then made its appearance, with increased evidence of debility and sinking, a quick and feeble pulse, and low fever, followed by profuse perspiration.

With such symptoms threatening, there was no time to be lost; every moment must be used in efforts to arouse and sustain the vital energies. I immediately painted the stump over with tinct. iodine, and administered at intervals of every half hour solution of quinine and tinct. ferri (small doses given frequently), with beef-tea for nourishment. Under this vigilant treatment, there was an amelioration of all her symptoms. The pulse diminished in frequency, the pallid countenance became flushed with a crimson hue, and on the morning of the 5th day after the operation, flocculi of pus were showing themselves in, and taking place of the thin, bloody discharge.

Persevering in the use of the tinct. iodine and the tonic regimen, the erysipelas declined, and the patient improved in a manner that was at once a surprise and a joy to all. The ligatures came away on the 15th day, and at the end of the fourth week, the stump was completely healed. She has since gained her previous weight, and the pale, emaciated, and suffering girl is transformed into a happy and robust woman.

Removal of a calculus from the bladder of a female child by forcible dilatation of the urethra—Nucleus a common pin—Recovery. By Henry Cook, M.D., of Sag Harbor, Long Island.—In the early part of June, I was requested, by a neighboring physician, residing at Amagansett, to visit a case of his in consultation, under the following circumstances:

The patient was a young girl, ten years of age, who was suffering from excessive irritation of the bladder, accompanied by frequent calls to pass water, attended by acute pain both before and in the act of urinating. This had existed, to a more or less degree, since the age of four years, being relieved for a time, when excessive, by some simple family remedies. Of late the pain had become so aggravated as to destroy her rest at night, at which time she appeared to be a greater sufferer than when up or sitting in a chair. The long continued and almost constant irritation had at last begun to make serious inroads upon her health; her appetite failed; she became much emaciated, and reduced in strength, with indications of hectic fever. The urine passed was generally high colored, and deposited a quantity of muco-purulent matter on standing.

The family physician, owing to the usual remedies failing to afford permanent relief, suspected that there was some other cause than simple disease of the bladder, to account for the unyielding nature of the symptoms, and he, therefore, made an examination with a metallic sound; but, owing to the excited condition of the child, and the great amount of resistance offered, did not succeed in directly coming in contact with a stone, but became satisfied of the existence of a foreign body.

The child being placed on her back, and the legs flexed, I introduced a sound, the point of which soon encountered a hard substance, which, on further examination, proved to be a calculus of some size. The question at once arose as to the best method of extraction, and the dilatation of the urethra was decided on as affording the child the best chance of ultimately recovering the power of retaining her water, the division of the urethra in the female being so frequently followed by that most distressing condition of things, a constant dribbling away of the urine, and excoriation of the surrounding parts.

Gradual dilatation by bougies was suggested, but this was soon abandoned, owing to the highly excited state of the child when the introduction of the bougie was attempted. It was, therefore, omitted, and the following operation performed: The child being placed in the position as recommended in operations for lithotomy, a concentrated preparation of ether was administered by inhalation, and the child partially brought under its influence. Weiss' urethral dilator was then introduced, and the urethra dilated to its utmost capacity; it was then removed, and a narrow, long-bladed pair of forceps passed in, and the stone seized and brought to the orifice of the bladder. It was found too large to pass, and forcible compression being used, it was crushed and removed in pieces of various sizes, by the repeated introduction of the forceps. The principal difficulty in the operation consisted in the seizure of the fragments without including the mucous membrane of the bladder; this was avoided by carefully rotating the instrument before extraction was attempted. The finer particles were then washed out by injecting the bladder with warm water. As soon as the operation was completed, an opiate was administered, and toward night an anodyne injection. This partially allayed the pain, so that some rest was obtained. The water dribbled away at intervals through the night.

About eight the following morning, one of the physicians visited the patient, and while there the child expressed a desire to be placed on a chamber, and on making an effort to urinate, a common pin was passed from the bladder, an inch and two-eighths in length, much corroded, with a quantity of calculous matter adherent to the point, and extending up a quarter of an inch. This was evidently the nucleus of the stone.

As to the period or method of its introduction, I have not been able to satisfy my own mind, and the family have no recollection of any facts which would elucidate the matter.

In six days from the operation the child recovered the power of retaining her water, the contractility of the neck of the bladder and urethra being so far restored; and in fourteen days all suffering had left her, and she became entirely relieved, and has continued perfectly well up to the present time—the 18th of August.

Removal of a fibro-cellular tumor from the tongue with the ecraseur. By THEODORE R. VARICK, M.D., Jersey City, N. J.—I was consulted on the 9th of June, 1858, by Ann ——, in consequence of, as she supposed, an enlargement of the tongue. On inspection I found a tumor developed in the substance of the tongue, to the right of the mesial line, and extending from the apex nearly half way to the os hyoides, at which place a distinct sulcus marked the line of demarcation. Posterior to this place, and extending apparently to its origin, the tongue was hypertrophied to about twice its normal thickness, and its margin was deeply indented by the teeth. Articulation was rendered indistinct, and deglutition was becoming seriously impeded.

From this time I saw her at intervals for about two weeks, during which time the increased growth was such that the tongue could with difficulty be retained within the mouth. The tumor, which had manifested itself about six months anterior to this date, had a soft, elastic, rounded feel, and was unattended by pain, and was found to be solid on passing an exploring needle into its substance.

Its removal having been decided on, I proceeded, assisted by Drs. Reeve and Senderling, as follows: The head being steadied by an assistant, the tongue was protruded, and, grasped by a vulsellum, was drawn out to its fullest extent. I then passed a sharp-pointed, curved bistoury through the tongue in the median line, posterior to the sulcus, and brought the point out near the frenum. Through the perforation thus made I passed the chain of a small sized ecraseur, and having secured it in its proper place, made the first cut transversely; which having been accomplished, I passed a loop of chain over the flap thus made and completed the operation by one in a longitudinal direction, thus removing a V shaped portion of the entire thickness of the tongue, including the tumor. The edges of the wound were brought together with two points of interrupted suture, which were removed on the seventh day, when *union by first intention was found to be complete through the entire extent of the wound.*

The time occupied by the operation was thirty minutes. There was not half an ounce of blood lost during the whole procedure, and the pain was trifling. The hypertrophied portion of the tongue gradually subsided to its natural proportion without further treatment. The tumor was found to possess a thin capsule, and was equal in size to an ordinary hickory nut. On section it presented white bands running in an irregular and wavy manner, and infiltrated with a viscid, yellowish fluid, which would exude on moderately firm pressure.

There are a few points of practical importance in the foregoing case which demand a passing notice. The écraseur has been, heretofore, almost exclusively applied to the removal of pediculated growths, and deep-seated sinuses, or in those cases where the part about to be removed could be readily encircled by a loop of chain, and has not, I believe, been applied to the removal of tumors developed in the substance of organs, by a procedure nearly approaching to a *flap* operation, with the intention of obliterating the former seat of disease by a union of the abraded edges of the wound. Under proper application, the écraseur does not prevent or interfere with union by first intention, as the result of this case sufficiently demonstrates.

In order to attain the object just alluded to, it is necessary that the finest possible chain should be used, as the finer the chain, the nearer it approaches to the character of a cutting instrument, and less crushing of the tissues takes place.

The risk of hemorrhage is greater in direct proportion to the smallness of the chain, for reasons that will be obvious on reflection.

To obviate the danger just alluded to, the motion should be slow in proportion as the chain diminishes in size, thereby affording an opportunity for a more perfect retraction of the inner coats of, and coagulation of blood in, the partially cut and partially lacerated vessels of the part.

Nine months after the operation the patient again presented herself, having a development in the opposite (left) side of the tongue, precisely corresponding, both in location and appearance, with the one already described, which was removed by the same instrument and in the same manner as the preceding.

The result of the second operation was equally satisfactory as the first, both as regards perfect union by first intention and the small amount of hemorrhage.

On fever and ague. By Dr. JOURDAN, of Buffalo, N. Y.—In the western parts of the United States, there exist three popular prejudices very serious in their result. I allude to the error, 1st. That the cure of the ague must not be too sudden. 2d. That it is better to let it wear out itself. 3d. That the ague is incurable in many localities.

To these errors we would reply that a long standing ague always determines the irritation or the inflammation of the brain, or the stomach, the liver, kidneys, and the spleen, and that a speedy cure of the disease is the only alternative, if we would prevent those complications; and, finally, that fever and ague is a disease curable everywhere, and in a very short time, without compromising the constitution of the patient, in the hands of an experienced physician. Fever and ague, dumb ague, chill and fever, so called, are nothing else than the intermittent fever in its various forms. and according to its various paroxysms; it is not a disease by itself, but the result of disorder of the nervous system in general, and particularly of the *cerebro-spinal axis*, consisting in hyperemia of the large nervous centres, viz., of the spinal marrow, *ganglia*, or of the brain. During the attack, the patient complains of headache, nausea, pain in the back; there is congestion of the blood in the brain, lungs, liver kidneys and spleen. In a long standing ague all these organs become more or less irritated or inflamed, and always in proportion to the duration of the fever and the strength of the patient, his age, and his constitution.

The appearance of an individual who has been suffering for months with this disease, will convince any one of my assertion. Some have the appearance of one in the last stage of consumption; others appear sinking with a chronic inflammation of the stomach; others with affections of the liver.

But if we refer to the pathology of those who have died of the effect of a long standing ague, we shall always find congestion, or other injury of the brain, sometimes of the stomach, or of some of the organs above mentioned. In 1852. writing upon this subject. I stated that 2,354 intermittent fever patients in the wards of a French military hospital on the north coasts of Africa, 759 of them suffering with the quotidian type, had disease of the mucous membrane of the digestive tube, and 321 of them had suffered from congestion of the brain; that in those suffering with tertian fever, the intestines were found diseased in 428 patients, and the brain in 175 others; 51 were affected with disease of the lungs, and 25 were affected with disease of the lungs and brain; 256 had suffered from chronic obstruction of abdominal viscera; 91 from disease of the spleen, and 20 of the spinal marrow.

It is evident, therefore, that if intermittent fever is not soon checked, it will lead to the inflammation of some of those organs above noticed, and it will, sooner or later, compromise the life of the patient; and if death is not the immediate result, there always will exist irregularities of the functions of the stomach, or a chronic inflammation or obstruction of the liver, frequent headaches, and, perhaps, chronic pulmonary affections.

It is only necessary to enumerate these results of fever and ague, when not properly cured, as a sufficient argument in favor of a speedy check of this disease, in the very beginning. The most obstinate ague will yield, in a few days, to the methodical treatment of a well-informed physician. My experience several years on the coast of Africa, where intermittent fever is very frequent among the soldiers, and ten years in the western States, has convinced me that the physician cannot rely on any specific, but only on a methodical treatment, the constitution of the patient, his strength and age being previously consulted. I have found that generally a bleeding, followed by the use of quinia, with such other remedies as the symptoms indicated, have always accomplished speedy and permanent cures.

Tubercular peritonitis with obscure symptoms. By Charles H. Rawson, M.D., of Des Moines, Iowa.—On the evening of June 6th, I was called to see Anne Day, aged nineteen, single. I found the patient apparently dying, extremities cold, pulse 130 and very feeble, and there was every indication of speedy dissolution. As she had taken no stimulus of any kind, I ordered her some brandy and water. I proceeded to examine her as much as her condition would permit, though her countenance and general appearance was sufficient to satisfy me of the hopelessness of her case.

Both upper extremities, to the elbows, were of a dark modena color; a few spots of the same color on the lower extremities. Emaciation of trunk and limbs was most marked; countenance thin, very pale; large dark circles around the eyes; pulse 130, very feeble; respiration somewhat hurried. On placing my ear over the lungs, respiration seemed natural. The mucous lining of the mouth was very pale; tongue pointed, flabby, and covered with a thin, whitish coat. Stomach irritable, and, without seeming effort, would discharge small quantities of dark green matter. On inspecting the abdomen, it was found to be moderately full, without distention. The walls were rather hard and incompressible, and not the slightest tenderness over any portion from firm pressure, except a small point over the stomach. I ordered a blister to be applied over this place, and continued the brandy.

June 7th, 9 A.M.—Found the patient more comfortable; her system, under the use of the brandy, had rallied, irritability of the stomach subsided, though the blister had not drawn; pulse 115, and fuller, though weak, her mind clear. I now learned her previous history. She was born of healthy parents; was the eldest of eight living healthy children; father and mother had lost relatives with phthisis; menstruated at the age of 13, and continued regular until two months ago; parents affirmed that she enjoyed good health until one year ago, when they noticed if she worked very much or exercised considerably, she seemed greatly fatigued, and would complain of pain about her shoulders, but all would pass away by resting a short time. During February last, her appetite began to fail; complained of heartburn; bowels constipated; had severe pain in the region of the left kidney. At this time she took some expectorant medicine, for attacks of asthma, which she suffered following croup, with relief both to the asthma, and a slight cough accompanying it. She continued in this condition until the middle of April, when her stomach became irritable, so as not to retain food, and she was apparently declining so rapidly that her parents, for the first time, consulted a physician.

What system of treatment was pursued, I did not learn, only that the constipation, irritable stomach, and loss of appetite, with gradual emaciation, continued; but the pain in the back subsided about the 10th of May, and for three weeks prior to my being called, no physician had been in attendance. By the use of some gentle stimulating cathartics, her bowels had been kept open, and her stomach had continued quiet, until the day before I was sent for, when irritability returned as before; but, during this long period, not one word of complaint about pain or tenderness in the abdomen, or any other part, except the back.

The patient died the next day, and her friends kindly consented to a post-mortem examination, a privilege we but seldom have granted in this country. Several medical gentlemen being present, I proceeded to open the chest. The *heart* was of normal size; about two ounces of serum in the pericardium; ventricles contracted, and no indication of disease. The *left lung* healthy throughout; *right lung*, in the upper portion, contained a mass of tubercles the size of a small hen's egg, and at the upper and posterior portion of this mass was a cavity the size of a small bean, which was the only point commencing to break down. The balance of the upper lobe appeared healthy and free of tubercles, and the remainder of the lung free from disease.

The lower portion of the *abdomen* was slightly tympanitic, and the first incision of its walls revealed the nature of the disease. The whole *peritoneum* lining the abdominal walls was firmly agglutinated to the omentum and other viscera, so that considerable force was necessary to separate the walls so as to enter the cavity. Any description I can give on paper will present but a faint idea of the extent of disease. But every point was studded with tubercles, which had excited inflammation, causing the effusion of lymph, which, in places, was from one-half to three-fourths of an inch thick. The *liver* and *stomach* were firmly attached to the diaphragm; colon, spleen and intestines to these and to each other. The liver was a little under the usual size, of a light yellow color; gall bladder small and flaccid. *Stomach* covered extensively with tubercles and false membrane; mucous lining injected in points, otherwise healthy. *Spleen* normal. From the navel to the pubis, the whole abdominal contents was of a dark green or black color, resembling mortification. The *pelvis* was full of pus. The *intestines* were softened. *Kidneys* and *bladder* healthy.

I have omitted to state that at no time during my short attendance was there heat of skin, and her parents informed me that she never had seemed feverish at any time, or had night sweats. I regard this case as the most obscure, most remarkable, and presenting the fewest positive diagnostic symptoms that ever occurred in my practice. It does not seem possible that a patient, with such a mass of tuberculous deposit, producing inflammation, with lymph and pus, should make no complaint except of pain in the back and irritable stomach.

EDITORIAL.

Infantile mortality in city and country.—It appears from the official report that 15,756 children died in this city during the year 1858. Of this number 8,228 were boys, and 7,528 were girls. This is a number 3,000 greater than the population of the city of Poughkeepsie—equal to the population of the city of Oswego, and 2,000 greater than the entire population of the county of Putnam. Of this number 14,939 were children under ten years of age—a number exceeding the entire infantile population of the same age in the neighboring counties of Richmond, Rockland, Putnam and Hamilton. 8,568 were under one year of age—a number nearly equal to the population of the city of Auburn, in this State.

According to the last census, the following conclusions are deducible: If these 15,[illegible] children had lived in Richmond County, but 10,[illegible] would have died in 1855; in Rockland, 9,[illegible]; in Putnam, 7,[illegible]. If the 8,[illegible] children which died under one year of age, had lived in Rockland County, but 3041 would have died during the same period; in Richmond, 2,[illegible]; in Putnam, 2,[illegible].

Recto-vesical Lithotomy.—This operation was recently performed by Dr. Bauer, of Brooklyn, with the most marked success. The patient was a man aged 26. The operation was performed, on the 15th of July, as follows:—The patient, not taking an anæsthetic, was placed upon his left side, with his legs crossed and drawn up; the bladder being injected, Sims's speculum was introduced into the rectum, and held firmly backward and upward, freely exposing the region of the base of the bladder; the left forefinger being placed upon the posterior margin of the middle of the prostate gland, a small two-edged scalpel was introduced on its median line through the rectum into the bladder, the wound was sufficient to admit the left forefinger; hæmorrhage slight; the stone not appearing in the escaping fluid, a pair of straight forceps was introduced, the stone seized and removed without difficulty. Its diameters, in inches, were 2¼, 1½ and 1; weight 1½ oz. The wound was closed by Dr. Sims with the silver suture, the catheter being retained. Convalescence proceeded without an unfavorable symptom, and on the 7th day after the operation the sutures were removed, and the wound found to be perfectly united. A new era dawns upon the operation of lithotomy!

The General Council of Medical Education and Registration of Great Britain.—This body, of which Sir B. C. Brodie is President, began its second session Aug. 31, at the Royal College of Surgeons of England. This council, of which we have given some account, is the Medical Parliament of England; having the power not only to place the profession upon a proper basis, but to establish a uniform standard of medical education, and compel its adoption by the various universities and schools. The first session was devoted to the subject of registration; at the present session medical education is to be the principal subject for consideration. We shall look with interest for the conclusions to which this distinguished body of representatives of the medical profession arrive.

The rate of payment for attendance upon the meetings of the council, which the members have voted to themselves, is five guineas per day to each member attending; five guineas a day, coming and returning, when the member resides over 200 miles from London; travelling expenses being paid at the rate of £[illegible] [illegible]s. for Scotland, and £[illegible] [illegible]s. for Ireland.

The New Sydenham Society of London.—This society is now ready to furnish the first three volumes of their publications; subscribers in this city can obtain them of Dr. Heywood, 66 West 20th street.

The Year Book of State Medicine, is the title of an annual volume, edited by Dr. Richardson, of the "Sanitary Review," announced by Churchill of London, the first volume to appear on 1st of January next.

The Proceedings of the National Quarantine and Sanitary Association, at its late meeting in this city, is about to be issued by the Common Council of New York, in a volume of upwards of 500 pages.

A New Edition of Beck's Medical Jurisprudence, edited by several distinguished physicians, is in press, and will soon be issued by Lippincott & Co

Journal de la Physiologie, edited by Dr. Brown-Sequard, for April, sustains the high tone of the series in the originality and completeness of its memoirs. This number contains ten original papers on physiology and medical subjects. This periodical should have a wide circulation in this country, where the editor is so well and favorably known.

The Ophthalmic Hospital Reports, edited by J. F. Streatfeild, entered upon its second volume with the May number. It is a most instructive publication to those interested in that department, containing original papers by the leading ophthalmic surgeons, and a quarterly report of the Ophthalmic Hospital.

M. Ricord has recently declared that the transmission of secondary syphilis, congenital or acquired, appears to him to be now demonstrated.

The King's County Medical Society numbers over 100 members, has regular semi-monthly meetings, and regularly publishes its transactions. This is the only one of the old county medical societies that maintains its true character—a scientific as well as ethical body.

The Annual Course of clinical instruction in Bellevue Hospital will commence in October. The Wood and Eliot prizes, $50 00 each, for anatomical preparations, are again offered to students.

The Florence Nightingale, the floating hospital in the lower bay of New York, is in charge of Dr. Elisha Harris, and has thus far given entire satisfaction.

Cholera has again appeared in London, arriving by the old route, from Hamburg, where it is very fatal.

The Buffalo Medical Journal, having prefixed to its title "New York Monthly Review," is now issued simultaneously in New York and Buffalo, the editor, Dr. Flint, having removed to this city. Prof. Austin Flint has also become a resident of New York.

The Homœopaths of this city are divided into two rival and hostile parties; the better educated, being progressive, favor more liberal views and larger doses.

PUBLICATIONS RECEIVED.

Gross (Samuel D.) A System of Surgery; Pathological, Diagnostic, Therapeutic, and Operative. Illustrated by nine hundred and thirty-six engravings. In two volumes. Philadelphia: Blanchard & Lea, 1859.

Headland (F. W.) The Action of Medicine in the System. Third edition, revised and enlarged. Philadelphia: Lindsay & Blakiston, 1859.

Reeve (J. C.) A History of the Discovery of the Circulation of the Blood, by P. Flourens. Cincinnati: Rickey, Mallory, & Co., 1859.

Reeves (James E.) A Practical Treatise on Enteric Fever; its diagnosis and Treatment. Philadelphia: J. B. Lippincott & Co., 1859.

Braithwaite's Retrospect of Practical Medicine and Surgery. Part 39. Townsend & Co., New York, 1859.

Tanner (T. H.) A Practical Treatise on the Diseases of Infancy and Childhood. Philadelphia: Lindsay & Blakiston, 1859.

The Half-Yearly Abstract of the Medical Sciences. By W. Ranking, M.D., & C. B. Radcliffe, M.D. Vol. xxix., London: John Churchill, Philadelphia: Lindsay & Blakiston.

Pamphlets.—Some Remarks on the Methods of Studying and Teaching Physiology, by J. Aitkin Meigs, M.D., Philadelphia.—Transactions of the Indiana State Medical Society, at its tenth annual session. Indianapolis, 1859.—Treatise on the immediate cause, and specific treatment of pulmonary phthisis, by J. Francis, Churchill, D.M.P., New York.—Medical communications of the Massachusetts Medical Society, vol. ix. No. v. 1859, Boston: 1859.

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PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*Hernia Cerebri of Traumatic Origin, with a table of thirty-one cases occurring in the New York Hospital.*[*] By ROBERT F. WEIR, M.D.

HAVING seen three cases of hernia cerebri during my term of pupilage, my attention was very naturally directed to a somewhat more extended investigation of the subject than is given in the ordinary text-books on surgery. The results of this examination, as obtained from the works of American and European surgeons, together with the statistics of fifty-five cases collected from the medical journals and the records of the New York Hospital, are now presented.

The term hernia, or improperly fungus cerebri (encephalocele), has been given to various protrusions and growths through openings in the skull, whether congenital or accidental in their origin; those arising from the latter cause alone, will be considered in this article. Hernia of the brain, moreover, occasionally occurs from syphilitic caries or absorption of the cranial bones. Mr. Cæsar Hawkins[†] relates an interesting case of a man aged thirty-six years, having a pulsating tumor five inches in diameter on the upper and posterior part of the head, from the centre of which a roundish tumor, the size of a walnut, projected through the scalp. The patient stated, that two years after the swelling appeared, it became inflamed, and it was twice punctured, giving exit only to a little blood. This was followed by the protrusion of the fungus through the scalp. The tumor was ligatured by Mr. Hawkins with an unfavorable result. A similar case is related by Mr. Stanley* in his paper on hernia cerebri. Of the protrusions resulting from external injury, Guthrie† describes two kinds: one, composed principally of coagulated blood, appearing immediately after or within two days of the injury, and having generally a fatal termination; the second variety is formed mostly of "brain substance," and occurs at a later period; "these protrusions rarely take place, when a considerable portion of the skull has been lost or removed, the brain being then able to expand to such an extent as the inflammatory impulse from within may render necessary." In this respect, Abernethy agrees with him. Mr. Rowe,‡ in the *Lancet*, makes three varieties: the first, arising from coagulated blood; the second, from protrusion of the brain itself; and the third, that form described as a "fungous growth," from the cerebral mass. Of the first kind, Guthrie states that the tumor is composed of blood effused in the substance of the brain, and which becomes more elevated as the inflammation proceeds, and finally protrudes through the cranial aperture; and Abernethy§ relates two cases of like nature, and offers the same explanation, stating that "the tumor is of a dark brown color, and covered generally by the pia mater; the cases are mostly fatal, and die before the fifth day." The true hernia cerebri, or tumor of brain-like substance, as already stated, takes place at a later period than the former variety, and occurs most commonly, when the cranial opening has been of greater extent than the size of one piece of bone removed by the trephine, the dura mater having either yielded directly from the injury, or from subsequent ulceration. It is not, under proper treatment, a fatal, although an extremely dangerous complication.‖

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[*] A Prize Inaugural Thesis submitted to the College of Physicians and Surgeons, March, 1859.

[†] *Lancet*, vol. i., 1856, p. 688.

Case V. illustrates many points in the nature of this form of protrusion.

Rosanna McQuillan, aged six and a half years, was, on May 22nd, 1856, struck by a brick, receiving a lacerated wound of the scalp, and a depressed fracture of the os frontis situated a little to the left of the median line, and about three-fourths of an inch below the coronal suture. There were present slight symptoms of concussion, as partial insensibility and vomiting, which were relieved by the hemorrhage caused by the removal of several loose spicula. In attempting to elevate the depressed bone, the outer table was separated from the inner, leaving the latter still driven in.

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* *Medico-Chirurgical Review.* vol. viii.

† *Commentaries on Surgery.* 1855, p. 375.

‡ *Lancet,* vol. i., 1850, p. 760.

§ *Surgical Works. Injuries of Head.*

‖ *Guthrie* (op. cit.).

On the 26th, she was first seen by Dr. Buck in consultation, and the operation of trephining was advised and performed, the patient being under the influence of ether. Crucial incisions were made, enlarging the wound of the scalp, and the inner table found fractured and depressed. One disc of bone was removed, and the remaining portions chipped away by means of Lüer's rongeur forceps (a very effective instrument for this and like purposes). The opening thus formed was about two inches long, and one wide.

On the 27th, she was slightly feverish, with moderate acceleration of the pulse: on the 31st, the dressings were removed, and the wound found nearly all united. She continued to improve until June 7th (12th day after operation), when it was noticed that the scalp was elevated, and forced open at the anterior portion of the wound.

June 8th.—The hernia appeared as a pulsating tumor, and the dura mater was noticed to have given way at the anterior corner of the fracture. Pulse frequent. Cerebral functions unimpaired.

June 13th.—Patient weaker. Pulse still frequent. Yesterday the hernia was touched with nitrate of silver in substance. To-day a portion of the tumor, about the size of a half dollar, was sliced off, which apparently consisted of brain substance; slight hemorrhage followed, which was easily controlled. Nit. Argent. was then applied. Discharge quite fetid.

June 14th.—Slight spasms of left side of face observed. Patient weaker and more irritable. Skin hot and dry. Discharge somewhat less, though most profuse in the morning. Arg. nit. reapplied.

June 17th.—(10th of hernia).—Spasms ceased. Pulse full, and moderately accelerated. Excised by ligature and scissors the whole protruding mass, which was about the size of a flattened hen's egg. No pain was experienced during the operation; the hemorrhage was trifling and readily arrested. The exposed surface of the brain was then touched with lunar caustic, and a compress applied by means of a circular piece of thick pasteboard, with several thicknesses of lint interposed, and the whole bound down by a bandage. The portion removed was unquestionably cerebral substance, the gray and white matter being distinctly visible.

June 23rd.—(16th of hernia).—Suffered no ill effects from the compression. Rested well. Pulse 118. On taking a deep inspiration, the brain hollows in to the depth of nearly an inch.

To-day, while removing the dressings, the effort of crying caused a jet of transparent fluid to be thrown from an opening in the centre of the exposed brain. This was repeated several times, and was supposed to proceed from the ventricle.

June 28th.—(21st of hernia).—Since yesterday, when the right side was convulsed, she has been in a comatose state. Pulse 130, and small. On examination of the wound to-day, there was found at the anterior part of the opening in the skull, a depression of the inner table, which was salient, projecting inwards, and sharp and rough on its edge. It must have escaped notice at the operation, although the bone was cut away to a considerable extent; it was at this point that the dura mater first gave way. Two openings, each the size of a goose quill, were seen in the middle part of the cut surface of the brain and through which the watery fluid, though less, still continued to ooze. The patient lingered until one o'clock the next day, dying in convulsions.

No necroscopy was allowed, but from external inspection, it was noticed that the brain had receded from the cranial aperture to such an extent that an egg might have been received into the cavity thus made. The two foramina, above-mentioned, were widened and separated by a narrow band of cerebral substance one-fourth of an inch in width. Through these canals the expanded ventricle could be seen.

The *excised portion* on the tenth day of the hernia, was in a sloughy condition, and was examined microscopically by Dr. Clark (vide, p. 302).

Of the third variety, or those tumors resulting from exuberant granulations from the brain, the following is an example:

Case XXXII.—Joanna Murphy, aged twenty-two, was admitted into the New York Hospital, October 26, 1858, with a compound depressed fracture of the skull, caused by blows inflicted with a hatchet in the hands of a person who attempted to take her life. The wound was situated over the left parietal bone, and was about four or five inches long, extending forward in nearly a direct line from the boss of that side. She was much prostrated and delirious from shock and loss of blood. There was also slight paralysis of right arm.

October 27th.—Was delirious all night. Pulse 96, and irritable. Pupils dilated. This afternoon patient was etherized, and two small portions of bone, irregular in shape, were removed. The dura mater, as well as the brain, was found lacerated. Lips of wound were brought together by sutures, and a compress and light bandage applied.

November 6th.—For several days past, she has had increased heat of skin, and a rapid pulse, from 115 to 130. Mind undisturbed. To-day, a protrusion about the size of the end of the little finger was observed in the wound; pulse strong, but not very frequent: had slight glossal paralysis, shown by inability to articulate distinctly.

November 24th.—Pulse has been 96, and quite full for several days past. The tumor, about the size of a hickory nut, appeared to consist of a mass of exuberant granulations. Paralysis of arm had diminished.

November 28th.—Has had three attacks of pain around the seat of injury, which were relieved by the application of leeches. At this time the granulating mass protruded about a quarter of an inch beyond the surface of the scalp, and was about the size of a walnut flattened. Argenti nitras has been daily applied to it.

December 9th.—Hernia has been nearly reduced to the level of the integument.

From that time the case progressed favorably, and she was discharged cured on the 27th of the month, no paralysis existing, and intellect being clear. She reëntered the hospital a few weeks after for the removal of some exfoliated bone.

The cause of these protrusions has been differently stated. Stanley* says, that to produce a hernia cerebri, "there must be an increase in the volume of the contused parts, caused either by a general distension of the blood-vessels of the brain, or by the addition of some new matter, as of water or pus."

Samuel Cooper† states that "hernia cerebri is a disease connected with deep seated changes throughout a great part of the brain, conjoined with the removal of bone." "The changes alluded to, may be supposed to cause an increase in the general contents of the skull, and thus a disposition to protrusion as rapid as the serum and other fluids are effused."

Brodie‡ also states, that in "compound fractures of the skull, the brain, losing the support which it derives from the dura mater, and having its vessels loaded with blood, would probably protrude in the form of what is denominated a hernia cerebri." Guthrie§ says it arises from a "low grade of inflammation of the brain;" Miller,‖ with Drs. Laurie and King,¶ ascribe its appearance to "disorganization of the brain by inflammation." Sédillot** says, that the appearance of the hernia is due to the pressure of a distended ventricle: "Dès que le crâne est ouvert, la pressure normale de l'encéphale par la boîte osseuse diminue et la sécrétion ventricale augmente sous l'influence de cette cause, et aussi en raison de l'état inflammatoire des parties," and he relates a case where a fistulous opening through the hernia communicated with the ventricle, and when it was open, the tumor did not appear, but when closed the protrusion took place. The case already quoted presents somewhat similar features, though the hernia was not noticed to recede after the escape of the fluid, probably from the fistula being minute, and. from its sides readily collapsing. In the "*Compendium de Chirurgie Pratique*,"* the cause of the extrusion, is stated to be due to arterial pressure, and the formation of the tumor to be favored by a narrow cranial opening.

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* Op. cit.

† *Surgical Dictionary*, article "Hernia Cerebri."

‡ *Med.-Chirurg. Review*, vol. xiv., p. 395.

§ Op. cit., p. 380.

‖ *Practice of Surgery*. p. 71.

¶ *Ed. & Lond. Monthly Journal*. 1844, p. 465.

** *Méd. Operatoire*, tome 1er, 530.

Propulsion from the arteries is adopted as the cause, by Flourens (Arch. Gen. de Med.) and N. R. Smith. Dr. Buck,† in his essay on this subject, asks whether "this disease may not be considered as a salutary resource of nature to relieve the brain (often only temporarily) from the compression which an increased afflux of blood, or the deposition of inflammatory products would otherwise occasion, and by which the function of this organ would be speedily interrupted," and adds, "that in all the cases in which he had an opportunity of making an examination, an abscess was found in the substance of the brain, or upon its surface in the immediate vicinity of the hernia."

Case XLV. is relevant to this point.

Patrick Cochran, aged twenty-four, was admitted into the New York Hospital, December 12th, 1852, with a compound depressed fracture of the cranium which occurred a week previous from a blow received in an affray. The wound was situated over the fronto-parietal suture, and to the left of the median line. Epileptiform convulsions, with other symptoms of compression came on within a few days, and when brought to the hospital, he was in an insensible condition; eyes fixed and staring; respiration stertorous; pulse 50, and intermitting, etc. Trephining was performed the same day by Dr. Halsted, and the depressed fragments either removed or elevated. No immediate improvement in the patient's condition was observed.

December 14th.—Was seized with a convulsion which was followed in a few hours by another. Pulse 68, and intermitting. The next day (15th) his condition was much better; convulsions had not recurred; a hernia cerebri appeared.

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* Par Birard. Denonvilliers. et Gosselin.

† *New York Journal of Medicine and Surgery*, 1840.

December 20th.—Pulse 57; still slightly intermittent in character. Hernia has not increased much, and is touched daily with the solid nitrate of silver, and moderate pressure employed.

December 26th.—General condition improved. Hernia has enlarged a little.

January 1st.—The protrusion has diminished; a small compress of sole leather, with a pad and adhesive straps have been used to effect pressure.

January 10th.—Pulse natural in force and frequency. The hernia slowly decreasing.

He progressed favorably, his mental and physical conditions being good, and was discharged cured, March 7th, 1853, having been so long detained in the hospital, to allow some necrosed bone to be cast off. Case LVII. is a very similar one.

That an opening in the skull and dura mater would allow a moderate amount of protrusion from want of support, and disturbance of the circulation by the diminution of the cerebro-spinal fluid (the "water-bed" of Dr. Arnott), the experiments of Magendie, as well as the observations of surgeons, sufficiently prove; while post-mortem dissections equally reveal, that inflammatory products are the chief agents in the extrusion. These products are, commonly, congestion or inflammation of the meninges of the brain, abscess, a distended ventricle, and effusion of blood, either upon or in the cerebrum.

Case II. is illustrative of the latter condition.

P. Delancey, aged 36 years, was admitted into the New York Hospital March 30th, 1850, with a compound depressed fracture of the left parietal bone, with laceration of the dura mater and brain, produced by a blow from a blacksmith's hammer. He was conscious but unable to speak; no paralysis of limbs or face; pupils dilated; pulse 108, full and strong. He was trephined the same day, and the fragments removed, the resulting opening being circular, and about one inch in diameter. The thumb could be passed into the pulpified brain to the depth of about one inch. Patient after the operation sat up, and signified that he felt better; his speech however was not restored; hemorrhage was considerable from the lacerated brain. In the evening, pulse having become more frequent and hard, ℥xij of blood were taken from his arm, with relief.

March 31st.—Passed a good night; no pain; pulse 102 and compressible; tongue furred, and drawn to right side.

April 1st.—Is comatose; pulse 140, weak; respiration feeble and labored. On removing the dressings a hernia cerebri was seen, the protrusion being in a softened state and easily detached. A female catheter *was introduced nearly two inches* into the brain, almost without resistance, in the hope of reaching a collection of matter and discharging it. No pus however escaped. He died the next day in the same comatose condition.

Necroscopy.—The dura mater was lacerated to a corresponding extent with the fracture, and through the latter a portion of brain protruded as large as a madeira nut. Under the dura mater a small clot of blood was found below and to the outside of the laceration of that membrane. The substance of the left hemisphere was broken up to the depth of one and a half inches below the seat of fracture, but no pus was seen. The other parts of the brain were apparently healthy.

As exemplifying hernia resulting from inflammatory products, Case IV. is apposite.

Michael Mooney, aged 24, was admitted June 1st, 1848, with a compound depressed fracture of the right parietal bone, which happened two days before from the kick of a horse. Complained of "numbness" of left side. Four days after, he was trephined, and several fragments removed; the dura mater was lacerated, and the brain protruded. On the 7th pulse was 80 and full. Skin dry and hot. VS. ad. ℥viij.

June 8th.—A slight protuberance noticed in the wound; no change in symptoms.

June 10th.—Had several convulsions confined to left half of body. Intellect clear. Applied slight pressure by adhesive straps drawn across the protuberance.

June 12th.—Convulsions have hourly recurred, during which the pupils are dilated and fixed, and the action of the heart very violent. VS. repeated, and tinct. aconite gtt. j.q.2h. given. Hernia had slowly increased, and was to day excised to a level with the bone; it consisted of brain matter, the cortical and medullary portions being distinctly recognized. Pressure was then applied by means of a plate of lead the size of the opening on the skull, a few layers of lint being interposed; and over all two thick compresses, the whole being firmly secured by a bandage.

June 16.—But two convulsions since last note; pulse 66, and of natural force. Hernia reappeared to-day from the bandages slipping off during the night; it was reduced by pressure with the fingers, which procedure caused some pus and softened brain to escape. Paralysis of left side has continued.

Became comatose during the day of the 17th, and died on the 18th, at 8 A. M.

Post. mortem examination disclosed an opening in the dura mater, the edges of which adhered to the hernia at its base. Purulent lymph was found around the tumor, which had receded, and beneath it an abcess capable of lodging the last phalanx of the thumb, extended into the corpus callosum, and to within a finger's breadth of the lateral ventricle; the surrounding cerebral substance was softened. Both ventricles moderately distended with serum. Elsewhere the brain was normal.

In the analysis of the fifty-five collected cases, Dr. Buck's method of investigation is adopted with slight modification.

Sex.—Of all the cases, but six occurred in the female sex, probably from their being less exposed to the sources of injury.

Age.—Of the fifty-five cases, the average age was about twenty years; the youngest case was two and a half years old; the oldest forty-six. Fifteen were twelve years of age or younger; between twelve and twenty years there were nine cases; between twenty and thirty there were nineteen cases; while between thirty and forty-six there were twelve cases. Of twenty-four cases, nearly one-half the whole number were under twenty years of age—forty-two below thirty years. In Dr. Buck's cases, seventeen were twelve years old or under that age, and twenty-six under twenty years. From which it appears that hernia cerebri is a disease of more frequency in children and in youth, perhaps from the cerebral circulation being then more active than at any other period of existence.

The *injury* of the head was caused in seventeen cases by falling, or projected bodies, as bricks, stones, pieces of coal, or wood, &c.; in seven by the kick of a horse; in seventeen by blows on the head, inflicted mostly by blunt instruments; in four by the discharge of fire-arms; and in ten by falls from a height, one of which struck upon a projection, and another from falling from a railroad car in motion. It will be observed from the preceding that in forty-six cases the injury was produced by concentrated violence applied by missiles or blows, while in the nine cases where it arose from falls, it is not stated whether or not the patient struck upon any sharp or projecting body.

The *seat of the wound* was in twenty-six cases over some part of the parietal region; in twenty cases in the frontal; in six the temporal, and in two the occipital region; there being nothing peculiar in this respect, as injuries calling for operation occur more frequently on the anterior and superior portions of the cranium than elsewhere.

The *lesions* were as follows: in every case but four, and one in which its condition was not noted, there was more or less laceration of the *scalp*. In one of the exceptional cases (No. XXV.) there was depression of the bony fragments, and the hernia did not appear until the 106th day, no particular complication existing with it. In every case save one, in which it is unmentioned, the *cranium* was broken into several fragments, which were depressed to various depths. In four cases, the opening was noted as being large, and in the cases that were trephined it necessarily could not have been very small; the largest apertures, were, in Case XXXIV. four by one inches, and in Case XXVI. which was three inches in its long, and one inch in its transverse diameter. In glancing over the Hospital cases, in the annexed table, it will be seen that the cranial deficiency varied much in size, in many the aperture being more than one and a half inches in diameter. In one case it was three by two inches in extent. The amount of depression, when noticed, will also be there found. In Case III. the amount of injury received and recovered from is worthy of more extended notice.

R. G. M., aged 15, admitted September 12th, 1842, with severe compound fracture of skull, and lacerated wounds of face, having been thrown from a wagon. On examination, there was found a compound fracture with depression of the os frontis to the left of the median line. In order to elevate the fragments, a small trephine was applied to the inferior part, and by aid of forceps, the depressed portions were taken away, and the largest one, which was triangular, found to consist of the entire orbital ridge of the frontal bone, with its orbital plate. About two tablespoonfuls of brain matter escaped. The same day, pulse being frequent and hard, ℥xviij of blood were taken from the arm, which was again done on second day to the extent of ℥xiv.

September 15th.—Delirious all night; pulse 100, compressible, though before venesection it had been frequent and tense.

September 20th.—A hernia cerebri of a dark brown color had appeared, being about two inches in its perpendicular, and one in its transverse diameter. A compress of eight thicknesses of patent lint of the size of the hernia, was placed over it and confined there by adhesive straps, and over this another thinner compress was secured by a bandage; making thus considerable pressure without causing pain or other symptoms.

September 27th.—Progressed favorably. Numerous portions of cerebral substance have been discharged from the wound; a plate of lead, the size and shape of the opening, was secured by straps, and a roller over the compresses. No cerebral disturbance has at any time shown itself from the pressure.

The disposition of the hernia to protrude ceased soon after the last note. Intellect remained clear, but his sight continued double, from unharmonious action of the muscles around the eye; the wound being healed, he was discharged cured November 17th.

The *dura mater* was lacerated in forty-three cases, uninjured in five, and abraded in one: not mentioned in six. (Vide case LIV. in table.) The *brain* was injured; that is, either lacerated, soft or pulpy in thirty cases. Of these, brain matter either escaped or protruded in eighteen cases. No escape of it, the dura mater being lacerated, in two cases, while in eleven, where that membrane was injured, the condition of the organ was not stated.

The *lesions* may also be thus expressed:

Compound depressed fracture with laceration of dura mater and brain, . . .	28 cases.
Of these, in 17 brain escaped: in 11 it is unmentioned.	
Compound depressed fracture a laceration of dura mater, ...	13 cases.
In one of these, ℥iv of blood escaped, in another there was a wound of the longitudinal sinus.	
Compound depressed fracture (nothing else stated).	4 cases.
" " " dura mater intact and in one of which the brain felt softened under the membrane. . . .	4 cases.
Compound depressed fracture, dura mater abraded.	1 case.
Simple depressed fracture: in one the dura mater was wounded and had a clot under it; one the dura mater was lacerated and brain escaped, . . .	3 cases.
Comminuted fracture (simple) depression not stated,	1 case.
Depressed fracture, nothing else stated, . .	1 case.

The *hernia appeared* in twenty-eight cases on, or prior to the seventh day; in fourteen instances from the eighth to the eleventh day, and in nine from the twelfth to the thirtieth day. It occurred in two cases beyond that time, and in the remaining two cases the date of its appearance is not mentioned. The earliest period of the protrusion was in four cases, at the time of the accident or operation. In four cases it was seen on the second day after the date of injury; in the latest case, No. XXVI. already referred to, the hernia was not perceived until the one hundred and sixth day, and in another case it was not observed until the thirty-ninth day. The average time of its appearance including the extraordinary late one, was about ten days; excluding it, renders the average time eight days.

In regard to the nature of the hernial tumors, surgeons have differed much in opinion.

Stanley, Guthrie, Brodie, Erichsen, Nélaton, Miller, Lawrie & King, Buck[*] and Smith, agree in considering the protrusion to be composed of brain substance in a softened or disorganized condition.

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[*] Op. cit.

Chelius[*] and South[†] speak of it as a mass of fungous granulations, resulting from blood poured out upon, or in the brain. Sir Astley Cooper ascribes it to granulations which form and project through the cranial opening. Rokitansky[‡] states that "in hernia cerebri the *brain* is protruded through accidentally "arising or intentionally made apertures in the skull and dura "mater—in a condition of inflammation or exuberant granula- "tions. Occasionally in consequence of incarceration by the "openings in the cranium and dura mater, the hernia becomes "sloughy throughout its whole mass, and is thus cast off." And also in speaking of lacerated wounds of the brain, he says, "that they heal by granulations which fill the chasm with a "cicatricial tissue, and which now and then are excessive, and "and grow outwards through the opening in the skull, forming "the so-called fungus cerebri of surgeons."

The *protrusion* in twenty-eight cases in which it was examined on dissection or excision, resembled in twenty-two, cerebral substance, the cortical and medullary portions being clearly distinguished. In four cases the hernia consisted of a clean red mass; in one case it was composed of exuberant granulations, and in one other it was "fungoid in its nature, being nothing like brain." In the remaining cases there was either no dissection, or the reports were defective in this particular.

The excised portions from Cases V. and XIX. were microscopically examined by Dr. A. Clark.[§] In that from the former case no more nerve were found, but cells and granules were observed in considerable quantity. It was constituted differently in different portions: one part was composed of granules of various sizes, greatly resembling in structure the diphtheritic exudation described by Brettoneau: another part consisted of granular cells with minute nuclei; and yet another contained cells with large nuclei and nucleoli. "No part of the cranium "could produce a substance similar to the second variety." Dr. Clark says: "It is constituted altogether independent of brain "matter." In the first and second parts single fibres were seen. In Case XIX. the excised portions were twice examined; no brain substance was found under the microscope. The hernia consisted of fibrin and hæmatoidin, and a granular mass mingled with blood-vessels. In neither instance was a trace of the normal elements of the brain found, although on simple inspection the hernia closely resembled cerebral substance.

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[*] *Chelius*, vol. i., p. 425.

[†] *Chelius*, vol. ii., p. 97, note by South.

[‡] *Pathologische Anatomie*, 1855, vol. ii. pp. 488 and 440.

[§] N. Y. *Journal Med.*, 1857, vol. i., pp. 83 and 108.

The first specimen that was examined, was in a sloughy condition, being removed on the tenth day of its appearance. May not the gangrenous state of the tumor prevent a recognition of the nerve matter, or may not the contusion or laceration of the brain, together with the results of inflammation, destroy or change the character of the nerve-cells? Further microscopical investigations, however, are needed to settle the question of the true nature of these extrusions.*

In nine cases the hernia reappeared after excision, though probably it did so in many cases in which it is not stated. That the portion first protruded is brain matter, is most likely, but whether the reproduced tumor is of that nature, and whether the amount of internal compression is equivalent to the new extrusion, the records do not reveal.

The *size* of the protrusion varied from that of a hazel-nut to the largest (Case XV.), which was six inches by three and a half in its respective long and transverse diameters, and projected two inches beyond the level of the skull. In nineteen cases the tumor was below the size of a hen's egg; in six it was of the same size; and in twelve it was larger; not noted in eighteen cases. The *discharge* in seven cases was fetid; in three serous; in three copious, the nature of it not being remarked. In two cases pus was discharged; and in three cases there was hemorrhage from the hernia. In one case the protrusion was enveloped by an organized membrane; in three other cases it was covered with granulations; in one case the hernia was "highly "vascular and shreddy"; and in another it was of a mottled, maroon color.

Pulsatile movement must necessarily have existed in nearly all the cases, though it is so stated only in a few; in one case, however, pulsation was absent, the hernia being described as a "red mass resembling that found in an acephalous fœtus." Also in one case coughing and respiration were noticed to produce no effect upon the tumor.

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* In the *Journal* for March. 1859, p. 252, it is stated that Dr. C. E. Isaacs had examined microscopically a portion of a hernia cerebri, and found it to be composed essentially of brain matter.

A portion of a hernia, resembling brain matter, mingled with blood, taken on the second day from its appearance, from a patient now (Oct. 14) at the N. Y. Hospital, was examined by Dr. A. Clark, who reported that it was composed of varicose nerve fibres, both broken and continuous, with the nerve cells unchanged; of blood vessels in abundance, with free and contained blood corpuscles; of a few fatty vessels, and of scarcely any granular matter. He says, "It looks almost like healthy brain matter, except the broken condition of the nerve fibres."

Dr. W. H. Draper, microscopist of the Hospital, also examined a portion of the same protrusion removed on the fourth day, and obtained the same results, with the exception of an increased quantity of granular matter being found.

The *vascular system* was excited in thirty-nine cases. The pulse was slow in three cases from compression, natural in seven, and in six cases there was no note made of its condition. In twenty cases more particularly examined, the pulse before the appearance of the hernia was more or less accelerated in thirteen cases, in three it was slow, in two cases it was not excited, and in the remaining three its frequency or character is not mentioned.

The *cerebral system* was disturbed as evinced by delirium, pain, irritability, rigors, and coma, in thirty-seven instances. Paralysis existed in fifteen cases, convulsions in eight, while both were present in ten cases. In four cases there were no cerebral symptoms. while the intellect remained clear in nine cases. In Case XIX. the patient had between two hundred and eighty and three hundred convulsions of the paralyzed side of the body during the space of four days, the intellect being clear until toward the termination of the disease, which resulted fatally, the patient dying with symptoms of abcess of the brain. In another case the appearance of the hernia aggravated the symptoms. In Case XXX. where the dura mater was intact, the appearance of the tumor through that membrane relieved the symptoms for a few days, and then they returned with renewed violence. In another case where the dura mater was unruptured the patient had no bad symptoms throughout; the superjacent membrane sloughed on the eighteenth day, the hernia at the same time appearing. He recovered. In the other cases no change in the symptoms was remarked after the protrusion took place.

Termination of the disease.—Of the fifty-five cases, thirteen recovered, and forty-two terminated fatally, or about one case in every three recovered ; a proportion of recoveries much less than in Dr. Buck's cases, in which about one in every two had a successful issue.* The youngest of the *fatal* cases was two and a half years old, the oldest was forty-six. the average age being about twenty years. Of these there were eleven under twelve years of age, eight between twelve and twenty, thirteen between twenty-one and thirty years, and ten over that age. Of those who *recovered*, the youngest was six years old, the eldest was also forty-six years ; the average age was nearly the same as in the other cases, viz., twenty-one years. There were four cases under twelve years, seven between that age and thirty, one was over forty, and in one the age was not mentioned.

Of the *successful cases*, eight had the intellect unimpaired at the termination of the disease, one had persistent paralysis, the condition of the mind subsequent to their recovery was not noticed in five cases. The duration of the shortest case was twenty-four days from the accident, and twenty-one days from the appearance of the hernia; that of the longest was about five months. Of the *fatal cases*, the shortest duration of any case was three days from the date of the injury; the longest was one hundred and fifty-eight days. From the time of the hernia's appearance, the shortest case was one day, the longest fifty-two days, the average being about seventeen days. Three of the cases died with pyæmia.

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* Of his thirty-three cases, seventeen died and sixteen recovered.

Pathological appearances on dissection.—In twenty-seven cases necroscopies were made, and revealed the following lesions: in eight cases recession of the brain was noted though this probably existed in all, from atmospheric pressure. In seventeen cases the brain was soft, pulpy, and disorganized, in one case it was "putrid looking." In eleven cases an abscess (rarely more than one in number), was found in the hemisphere corresponding to the injured side, and generally situated immediately beneath the hernia. In one case where inspection and palpation only were permitted, a sense of fluctuation was detected below the hernia. In another, Case V. the ventricle was seen through external openings. In one case, pus in large quantity was found between the dura mater and the brain; in Case XXV. an abscess containing ℥ix. of pus existed; and in Case XLIX. an abscess holding ℥vj. of pus was found. In six cases the ventricles were distended, perhaps an effect as well as a cause: in twelve cases some inflammatory lesion of the dura mater or arachnoid, as congestion, thickening, or deposition of lymph or pus, was ascertained. In five cases a clot of blood was discovered in, or upon the surface of the brain. The hernia in seven cases was examined after death, in six of which it consisted of softened brain matter; in one case it was stated to be "fungoid in its nature."

The general treatment consisted of bleeding from the head or arm, active purging, the use of cold to the head, mercury, etc., as the urgency of the symptoms required. In Case XI. nothing was done in the way of general treatment, as at the time of the injury there was a free hemorrhage from the wound.

The local treatment, which is the more interesting, consisted of the application of caustics, such as nitrate of silver, sulphate of zinc, nitric acid, both in a pure and diluted state (gtt. xx. ad. ℥j. aquæ), lime water, sulphate of copper, etc,; or by the use of compression by means of either straps of adhesive plaster, or a plate of lead or pasteboard, bound down firmly by a bandage. In a number of cases excision by the knife or scissors was resorted to, and occasionally the ligation of the mass was employed.

The local treatment advised by European surgeons, is as follows:

Guthrie prefers the use of moderate pressure, such as can be borne with comfort and persisted in with propriety, and looks with disfavor on removal of the hernia either by caustics or by the knife. In two of his cases too firm compression of the tumor produced in one, swimming sensations, pain in the head, and retardation of the pulse; in another, syncope supervened. He also advises, that pressure should be applied lightly while the protrusion is increasing, but should be augmented when it becomes stationary, and during its diminution and recession.

Miller uses pressure, and considers ablation, except where the hernia is in a sloughy condition, to be inexpedient. The use of escharotics, he thinks, is in no case advisable. In the Compendium of Practical Surgery, pressure is recommended, it being doubted whether excision is ever necessary. Astley Cooper is also an advocate for pressure conjoined with the use of liquor calcis.

Stanley states that when a protrusion of the brain has taken place, the employment of pressure with a view to effect its return into the skull, is entirely out of the question, and confesses that he is unable to determine whether to excise the mass at once, or to allow it to slough away. At the Glasgow Infirmary,* the local treatment consists in support or moderate pressure of the tumor combined with application of stimulating or astringent dressing, as resinous ointments, blackwash, nitric acid lotion, etc. Erichsen slices off the growth to a level with the brain, and then applies a compress and bandage over the part, and considers the treatment extremely unsatisfactory, for if the tumor is shaved off, it commonly sprouts again until the patient is destroyed by the irritation and coma conjoined.

At the New York Hospital, pressure is at first resorted to, graduated according to its influence on the cerebral functions, if this does not suffice, caustics and excision are employed; the latter especially, if the hernia be large. Frequently, the sloughing produced by the strangulation of the mass, is of itself adequate to its removal, and sometimes the protrusion spontaneously subsides. Pressure, in the Hospital, is generally applied by means of a plate of lead the size of the cranial vacuity, placed over the aperture with several thicknesses of lint interposed, and the whole secured by a firm bandage, which serves quite effectually to control any disposition to protrusion of the tumor. With these means the occasional use of the solid nitrate of silver is combined.

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* Laurie & King, op. et loc. cit.

The method of treatment pursued in the collected cases, was as follows: in the whole number of cases, excision was practised seventeen times, in six of which it was noted that no pain was experienced from the operation, in four cases the hemorrhage was slight, while in two cases it was free. Caustics were used in seventeen cases, and no ill effects followed their application in any instance. In thirty-two cases, compression was employed, in six of which disagreeable symptoms resulted, such as coma, vomiting, dizziness, and syncope, and once, facial paralysis; no bad symptoms followed in eleven cases, and in one the patient felt better after the compress and bandage had been applied. In only three cases was the ligature employed, while in thirteen cases, all of which were fatal, nothing was done locally. Ice to the hernia was used in two cases, both of which died.

In the *fatal* cases, forty-two in number,

Caustic, with compression, excision, and the ligature, was used in	1 case.
Caustic, with compression and the ligature, in	2 cases
Caustic, with excision in	1 case
Caustic, with compression, in	2 cases
Caustic, with compression and excision, in	4 "
Compression and excision, in	8 "
Compression alone, in	5 "
Excision alone, in	1 case
Ice applied, in	2 cases
Nothing done, in	13 "
Not mentioned, in	2 "

Or, stated otherwise, caustic was employed in ten cases, compression in twenty cases, excision in eighteen, and the ligature in three. In four cases, pressure was not tolerated, inducing one or more of the before enumerated symptoms. In case XXII. the tumor was excised, and then the surgeon "dug away the mass to below the level of the skull, without any ill effects, though compression was not well borne." In two cases, pure nitric acid was used without any consequent ill effects.

In the treatment of the thirteen *successful* cases,

Caustic, alone was relied on in	1 case.
Caustic, with compression and excision, employed in	2 cases
Caustic, with compression and excision, employed in	4 "
Compression alone used in	5 "
Compression with excision, succeeded in	1 case

In one, dry sulphate of zinc was kept applied to the protrusion without ill consequences.

Tabulated differently, it is found that in twelve cases pressure was used, in three of which, no ill effects arose, in one, it produced vomiting, and in another syncope and giddiness. Caustics were applied in seven cases, and in three, ablation of the tumor was practised.

It is worthy of notice, that in the unsuccessful cases, eighteen were treated by excision alone or combined with other means, or one in every $2\frac{1}{3}$ cases, while in those cases that resulted favorably, only three were so treated, being only 1 in $4\frac{1}{3}$ cases.

On reviewing the results of the post-mortem examinations, it was observed that in seventeen cases, thirty-one per cent. of all, or forty per cent. of the fatal cases, there was either an abscess or a distended ventricle found, and in eleven cases, the abscess was directly below the hernia. A fact bearing pertinently on the plan of treatment practised by Nélaton and Dupuytren. The former in his *Pathologie Chiurgicale** says, "on a pleusieurs fois pratiqué des incisions du cerveau pour évacuer "un foyer, et l'on n'a pas remarqué qu'elles aient aggravé les "symptoms, loin de là elles ont été quelque fois utiles." and cites the example of Dupuytren, who plunged a bistoury into the brain, evacuating thereby an abscess; "heureuse audace, "digne du génie le plus éminent chirurgicale des temps "modernes et qui sauva le malade!" exclaims Nélaton.

Remarks.—From the examination of the fifty-five cases, it is seen that a fracture of the skull with depression, is the only condition essential to the formation of a hernia cerebri: it is also well known that this disease does not always ensue even in cases most favorable to its appearance, as for instance in laceration and escape of the brain. Dr. Buck, in the examination of sixteen cases of injury without hernia did not detect any peculiarities in the primary injury, "nor," he says, "does a "comparison of the symptoms indicative of cerebral inflamma-"tion, show the reason of its appearance in some cases, and its "absence in others; we find in both inflammation existing, in "various degrees."

Concerning the frequency of the occurrence of hernia cerebri, the following may be of some value. In one hundred and twenty-eight cases of various fractures of the cranium occurring in the New York Hospital from 1839 to 1851, there were ten cases of hernia, being about eight per cent., and in fifty-seven operations for fracture of the skull reported in the London and *Edinburgh Medical Journal* for 1844, there were fourteen cases of hernia resulting, or one in every four cases.

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* Tome IIe 557, 573.

When considering the proportion of recoveries, it must be remembered that more successful cases are made public than unsuccessful ones, hence, a more reliable ratio is that obtained from the hospital cases, thirty-one in number, in which there were five recoveries and twenty-six deaths, that is to say, about eighty-four per cent. of the cases terminated fatally.

List of the cases and where collected.

1–4.—Hospital Records.
5.—Practice of Dr. Buck.
6–8.—Hospital Records.
9.—Lancet, Vol. I., 1848, p. 305.
10. " Vol. I., 1848, p. 306.
11. " Vol. I., 1850, p. 406.
12. " Vol. I., 1850, p. 760.
13. " " " "
14.—Miller's Practice of Surgery, p. 75.
15.—British and Foreign Medical Review, 1840.
16.—London and Edinburgh Monthly Journal, 1841, p. 150.
17.—Lancet, Vol. II., 1846, p. 503.
18.—New York Journal of Medicine and Surgery, Vol. IV., p. 307.
19. " " " Vol. I., p. 83, 1857.
20.—Guthrie's Commentaries, p. 377.
21. " " " 378.
22.—London and Edinburgh Medical Journal, 1844, p. 465.
23. " " " p. 468.
24. " " " p. 469.
25. " " " p. 470.
26. " " " p. 471.
27. " " " p. 472.
28. " " " p. 474.
29. " " " p. 475.
30. " " " p. 476.
31. " " " p. 477.
32.—Hospital Records, 1858.
33.—Lancet, December, 1858.
34.—Medical Times and Gazette, December, 1858.
35–57.—Hospital Records.

A Table of Thirty-one cases of Hernia Cerebri, occurring in the New York Hospital from 1837 *to* 1859.

Sex. Age.	Mode of Violence. Seat of Injury.	Lesions.	Date of Appearance and Character.	Vascular and Cerebral Symptoms.	General Treatment. Termination.	Local Treatment.	Post-Mortem Appearances.	Reference. Surgeon.
F. 8	Falling piece of timber. Left parietal os.	Comp. dep. fract., with laceration of brain and d. mater.	7th day. Symptoms relieved by its appearance. Not mentioned.	Pulse strong and frequent. Intellect clear until near end.	VS. Tart. Antimony. Died 24th day fr. accident, with symptoms of abscess.	Ice applied to tumor.	None.	Hospital Records, 1837. Case 35. Dr. J. Kearney Rodgers.
M. 10	By a gate falling upon him. Left Parietal and Frontal and sphenoid.	Comp. dep. fracture, with laceration and escape of brain to amount of ℥ss. Opening large.	7th day. Size of Walnut. Considered to be brain substance.	Pain in head, frequent pulse, feb. action. Paralysis of right arm. No change after hernia appeared.	Cold to head. Calomel. Died 18th day. Comatose.	Compression with no ill effects. Excision, and hernia reappeared next day.	None.	Hospital Records, 1838. Case 36. Dr. J. Kearney Rodgers.
M. *17	Fall fr. a height. Left os frontis.	Comp. dep. fract., with laceration of dura mater, and escape of brain. Opening large-involving orbit.	6th day. Large as a butternut, and composed of brain. Purulent discharges.	Hernia preceded by del'm, frequent pulse, &c., which ceased after tumor appeared, leaving mind clear.	Bleeding and moderate purging. Recovered in ab't 2 months. Intellect clear.	Excision, compression and caustics. No pain. Pressure well borne.		Hospital Records, 1839. Case 37. Dr. Gurdon Buck.
M. 30	From blasting rocks. Left os frontis.	Comp. dep. fract., with injury of dura mater and protrusion of brain. Fract. call'd 'extensive.' Opening 1½ in. diam. and circular.	3d day. Considerable discharge.	Intermittent pulse only symptom noticed. Sensible throughout, with nothing unfavorable.	Bleeding and moderate purging. Recovery 24th day. Mind clear.	Compression, excision and caustics. Hernia reappeared after ablation.		Hospital Records, 1840. Case 38. Dr. Hoffman.
M. 15	Thrown from a wagon. Left os frontis.	Comp. dep. fract.; dura mater and brain lacerated. ʒjs of brain escaped. Depression 1 inch.	8th day. Size, 2 inches perpendicular, 1 in transverse diameter.	Considerable vascular excitement, but little central disturbance.	VS. Recovery in about 2 months. Intellect clear.	Compression used, wh. did not aggravate symptoms.		Hospital Records, 1842. Case 3. Dr. Buck.
M. 24	Kick of a horse. Right os parietale.	Comp. dep. fract., with dura mater, and brain lacerated.	7th day. Size of a tablespoon and of brain substance. Pus discharged.	Pulse natural. Left side paralyzed. Intellect intact.	Bleeding. Died on 21st day.	Excision, and arg. nit. No pain; but little hemorrhage.	Pus in sulci by side of hernia, and beneath it an abscess found. Brain soft and pulpy.	Hospital Records, 1848. Case 4. Dr. Hoffman.
M. 2½	Falling from a height. Right temporal.	Simple dep. fract., with laceration of dura mater and protrusion of brain. Fract. extensive, and comminuted.	10th fr. injury. 5th day fr. operation. 'A small knuckle of brain.'	Preceded by paralysis of left side, and by symptoms of compression. Pulse much accelerated. No change after hernia appeared.	Cold to head. Died 11th day in convulsions.	Cold to head the only treatment mentioned.	None made.	Hospital Records, 1848. Case 39. Dr. Hoffman.
M. 27	Kick of a horse. Os frontis.	Comp. dep. fract., laceration of dura mater, and escape of ℥iv. of blood. Opening size of quart. dol.	39th day. 'Somewhat large.'	Had almost recovered when on 26th day had pain in head; pulse frequent, and afterwards slow and weak. Symptoms not relieved by	VS. and purging. Died on 40th day.	Excision, and pressure by lead plate. No ill effects from compression.	A large quantity of grumous blood in the left hemisphere, which was softened.	Hospital Records, 1849. Case 40. Dr. Rodgers.

M. 27	By a falling stone. Temporo-frontal region.	Comp. dep. fract., with laceration of dura mater and brain. Fract. very "extensive."	5th day. Protruded 1¼ inches.	An attack of vomiting preceded the hernia. Pulse frequent, and patient very restless and delirious. Oozing of blood was present. No paralysis.	Cold to head and purging. Died on 6th day.	Locally nothing.	A large clot, ½ inch in thickness, was found outside the dura mater. Right hemisphere softened. Fracture extended to base.	Hospital Records, 1849. Case 41. Dr. A. C. Post.
M. 36	Blow from a hammer. Left parietal region.	Comp. dep. fract., with laceration of dura mater and brain, latter to depth of 1 inch. Free hemorrhage.	3d day. Size of a Madeira nut, and of softened brain.	Frequent pulse. Stupor, and other symptoms of compression.	Bleed'g and purging. Died 4th day. Comatose.	Locally nothing.	A clot found between brain and dura mater. No pus. Left hemisphere pulpefied 1½ inches in depth at seat of injury.	Hospital Records, 1850. Case 2. Dr. G. Buck.
M. 22	Blow from a shovel. Parietal region.	Comp. depressed fract., with laceration of dura mater and brain. The latter pulpy.	8th day. 4½ inch. long by 2 wide. Semiputrid brain. Much fetid, hernia sloughy.	Preceded by frequent pulse and delirium. Pain in head. Symptoms not relieved by hernia. Paralysis of left side of body and face. Died comatose and with symptoms of compression.	Leeching and purging. Died 13th day, comatose.	Nit. Argent. Compression and excision by ligature. Slight hemorrhage. Pressure produced stupor, insensibility. H. reappeared.	A large quantity of fetid pus between dura mater and brain, which latter was coated with purulent lymph—H. had receded.	Hospital Records, 1850. Case 1. Dr. Gurdon Buck.
M. 22	From a blow. Right os frontis.	Comp. depressed fracture. Dura mater lacerated. Opening ¾ inch in diameter.	19th day. Protruded 1¼ inch.	Before hernia appeared intellect clear. No paralysis. Great pain in head, to which succeeded paralysis of left side of body and coma	Cold to head and purging. Died 23d day, comatose.	Locally nothing.	Adhesions, pus found between membranes. Anterior lobe of right hemis. disorganized and soft.	Hospital Records, 1851. Case 42. Dr. A. C. Post.
M. 24	Fall fr. a height. Right parietal region.	Fracture with depression. (Nothing else stated.) Opening size of a silver dollar.	4th day. No description.	Preceded by febrile excitement. Delirium. Frequent pulse, stupor, and twitchings of face, and paralysis of right side of body. No change after hernia appeared.	General bleeding. Died 6th day.	Locally nothing.	None made.	Hospital Records, 1851. Case 43. Dr. R. K. Hoffman.
M. 30	Fall fr. a height. Left os frontis.	Simple comminuted fract. (dep'n not noted). Dura mater not wounded. Opening over 1 sq. inch.	15th day. "Resembled brain."	H. discovered on opening an abscess at seat of injury. There was great disturbance of the system from other severe injuries, as fract. femoris and both arms.	None mentioned. Died on 26th day.	None stated.	A clot found on outside of dura mater, and that membrane was lacerated.	Hospital Records, 1852. Case 44. Dr. G. Buck.
M. 24	Struck by a stone. Left parietal region.	Comp. fract. with depression to depth of ½ inch. (Nothing else stated.)	10th day, or 3d after operation. No description.	Preceded by symptoms of compression, which were relieved by trephining, and by convulsions which stopped when h. appeared. Did well after which.	Recovered in 90 days. Retarded by dead bone being cast off. Intellect clear.	Nit. Argent. and pressure by a leathern pad.		Hospital Records, 1852. Case 45. Dr. T. M. Halsted.
M. 12	Fall from a R. R. car. Right parietal region.	Comp. dep. fract. dura mater, but brain felt softened under it. Opening 3 by 2 inches. Depression amounted to ¾ inch.	6th day. Size of ½ medi'm orange. Called cerebral substance.	On 5th day paralysis of left side and stupor. D. m. was tense, and on being punctured gave exit to a free discharge of pus. 2 herniæ, separated by a band of d. m., seen, which was divided, and allowed brain to protrude freely. Pulse not very frequent. Hernia induced no change.	Ice to head, &c. Died on 11th day.	Excision and compression. No ill effects from latter. Great disposition to protrusion when pressure taken off.	Both hemispheres and base covered with creamy pus, especially the right, which was softened and disorganized around seat of hernia.	Hospital Records, 1853. Case 46. Dr. Buck.
M. 14	Fall fr. a height. Right os frontis.	Simple depressed fract. with laceration of dura mater, and a clot beneath it. Opening was 1 by 1½ inches in size.	4th day. 5th day it broke down, and both it and clots oozed from the wound.	Preceded by delirium, feb. excitement, frequent and full pulse. No change noticed after hernia appeared.	Leeches, calomel, and cold to head. Died on 6th day.	Pressure.	No necroscopy allowed.	Hospital Records, 1853. Case 47. Dr. Halsted.

A Table of Thirty One Cases of Hernia Cerebri, occurring in the New York Hospital from 1851 to 1859.—Continued.

SEX. AGE.	MODE OF VIOLENCE. SEAT OF INJURY.	LESIONS.	DATE OF APPEARANCE, AND CHARACTER.	VASCULAR AND CEREBRAL SYMPTOMS.	GENERAL TREATMENT. TERMINATION.	LOCAL TREATMENT.	POST-MORTEM APPEARANCES.	REFERENCE. SURGEON.
M. 17	Falling from a car in motion, striking a projection. Left *occipital* region.	Comp. depressed fracture, with laceration of dura mater and escape of brain. Fract. of several fragments and styled "extensive."	14th day. Size of a small orange. Cerebral substance, sloughy.	Preceded by febrile excitement, with accelerated pulse. Paralysis of right arm. Mind clear. Succeeded by a less rapid pulse; glossal paralysis and coma.	None, except febrifuges. Died on 11st day, comatose.	Comp'n by zinc plate, ligature. Argent. nit. and nitric acid pure, were also used. No ill effects from pressure.	Superior surf. of left hemisphere was collapsed, and covered with pus at post. part.; its substance softened. Ventricles distended with serum.	Hospital Records, 1854. Case 48. Dr. Buck.
F. 4	Gunshot wound. Os frontis.	Compound fract., with depression and protrusion of brain. Opening size of a bullet, which was increased by the trephine.	5th day. "Quite large," of broken down and sloughy brain.	Accelerated pulse, disturbed intellect, paralysis of right arm, preceded the hernia, from the 2d day of which but slight symptoms, then convulsion of sound side.	Cold to head, low diet and purging. Died on 40th day.	Locally nothing.	Abscess holding ℥vj. of pus, communicated with the wound by the track of the shot. Brain on that side softened. Fract. also of os occipital.	Hospital Records, 1854. Case 49. Dr. Cheesman.
M. 28	Blow from an axe. Left occipito parietal suture.	Comp. dep. fract., with laceration of dura mater. One fragment was of the size of quart. dol.	17th day. Called a "hernia of the brain."	Pain in head, slow pulse, paralysis of opp. side, with other symptoms of compression.	Blisters, purging, and by calomel. Died on 28th day.	Excision, hernia reappeared; then pure nitric acid.	No necroscopy made.	Hospital Records, 1854. Case 50. Dr. Cheesman.
M. 21	Fall fr. a height. At vertex.	Comp. dep'd fract., with wound of dura mater, and escape of brain. Opening was semilunar, and 2 inches long. Complicated with fract. of the pelvis.	6th day.	Had paralysis of right side and convulsions before hernia appeared, which increased until termination. Not much arterial excitement either before or after hernia appeared.	Died on 26th day.	Excision and caustics freely. Hernia continued to protrude after excision.	No necroscopy made.	Hospital Records, 1855. Case 51. Dr. Jno. Watson.
M. 35	Fall fr. a height. Right os frontis.	Comp. depressed fracture, with laceration of dura mater. Opening in skull 1¼ inches in diameter.	4th day. A pulsating tumor in wound. Small in size.	Appearance of hernia coincident with symptoms of compression. Paralysis of *right* side came on.	Cold, calomel, cathartics. Died on 8th day.	Moderate pressure.	Abscess in brain directly below hernia; also a small one in *left* hemisphere. Pus between membranes.	Hospital Records, 1855. Case 52. Dr. T. M. Markoe.
F. 8	By a falling brick. Vertex.	Comp. dep. fract., with wound of longitudinal sinus. Opening in skull 1 by 1½ inches.	7th day.	Preceded by chills, spasms, and strabismus of left eye, which continued after hernia appeared, with also paralysis of right side.	Cups, cold to head, cathartics and calomel. Died 19th day. Comatose.	Locally nothing.	A deep abscess at seat of fracture and softening of brain in vicinity. Another abscess postr. to 1st, and clot at base of brain.	Hospital Records, 1855. Case 53. Dr. Markoe.
M. 36	Blow from a falling stone. Left parietal region.	Comp. dep. fract., with no laceration of dura mater. The fract. was about 3 inches long.	7th day. Size of end of little finger; disappeared in 18 days.	Preceded by pain in the head, rapid pulse, and slight paraplegia. Succeeded by flying visits of paralysis and stupor.	Died 26th day. Comatose.	Firm pressure employed, and hernia disappear'd in 10 days. Probably the d. mater did not give way.	Pus in large q'ntity bet'n. membranes of left side. Brain on that side soft'nd. D. m. only abraded; hernia had not broken through it.	Hospital Records, 1856. Case 54. Dr. Watson.
M. 31	Blow from a hammer. Left parietal region.	Comp. dep. fract., with laceration of brain and dura mater. Brain softened.	11th day. Size of hazel nut. White and leathery looking. Pulsating.	Preceded by accelerated pulse and convulsions.	Bleeding and purging. Died on 18th day.	Locally nothing.	Hernia receded. Brain was softened.	Hospital Records, 1857. Case 6. Dr. Buck.

M. 14	Blow from flying capstan. Right temporal region.	Comp. dep. fract., with laceration of dura mater and brain, with escape of latter. Fracture "extensive."	2d day. Oblong in shape, 2 or 3 inch. long. "Softened and congested brain."	Pulse rapid and quick. Great restlessness. Skin hot. Respiration stertorous. Left side paralyzed at time of injury. No change in symptoms. Hernia sloughy.	Cold to head and stimulants. Died 3d day.	Locally nothing done.	Inspection only allowed. The dura mater was lacerated some 2 or 3 inches.	Hospital Records, 1857. Case 55. Dr. W. Parker.
F. 23	Blow with a hatchet. Left os frontis.	Comp. dep. fract., with laceration of dura mater.	13th fr. accident, 3rd day from operation. Broken down brain. Toward termination the hernia scabbed over.	Before operation symptoms of compression were present, and by which they were slightly relieved. Pulse rapid and full. Hemiplegia of right side, and convulsions throughout case.	Cold, purging, blistering and trephining. Died on 19th day.	Locally nothing.	At *operation* the d. mater. was found thickened and lacerated. Two-thirds left hemisphere was broken down into a pinkish mass, forming an abscess. Pus found in circulation.	Hospital Records, 1858. Case 56. Dr. Markoe.
F. 22	Blow from a hatchet. Left parietal region.	Comp. dep. fract., with laceration of dura mater and brain.	10th day. Dark col'rd, size of hickory nut. Compos'd of exuberant granulations.	Preceded by pain in head. Paralysis of arm and tongue.	Leeching p. r. n. Recovery 61 days, with intellect clear.	Argent. nit. in substance, and slight compression.		Hospital Records, 1858. Case 32. Dr. Markoe.
M. 4	Kick of a horse. Os frontis.	Comp. dep. fract. Dura mater intact.	5th day. Tumor of a mottled maroon color. Covered with granulations.	Accelerated pulse, pain in head. Shrieking, with clenched hands, both before and after hernia appeared. Vomiting increased protrusion very much.	Ordinary treatment for inflam. Died on 14th day.	Nothing locally.	No necroscopy.	Hospital Records, 1858. Case 7. Dr. W. H. Van Buren.
M. 32	Struck by a conch shell. Right parietal region.	Comp. dep. fract., with laceration of dura mater and brain, with escape of latter.	9th day. Pulsating tumor. "Not very large."	Inflammatory symptoms present. Vascular system much excited. Toward termination, however, p. was 52. 2d day from operation had 2 convulsions, which did not recur on opening the wound.	Cups, calomel and cathartics, with blisters. Died on 32d day, comatose.	Nothing locally.	Much congestion of membranes. Just below cranial opening, an abscess with firm walls was found on the brain, and whole right hemisphere was softened.	Hospital Records, 1858. Case 17. Dr. Halsted.
†M. 26	Buried by an embankment. Left parietal region.	Contused wound of scalp. Potts' puffy tumor. Symptoms of compression. Trephined. Also comp. fract. of left leg.	31st day, 3d from operation. Size of hickory nut.	Symptoms of comp'n came on, accompanied by epileptiform convulsions, for which he was trephined. D. m. was thickened, and there was effusion under arachnoid. Was relieved for a short time by the operation.	Stimulants and tonics. Died 34th day.	Nothing done.	Brain was filled with abscesses. 3 principal ones. 1st, one penetrated into right ventricle, and communicated with the cranial aperture. Another abscess was found in centre of right hemisphere. These abscesses had pyogenic membranes. Brain around them was much softened.	Hospital Records, 1858. Case 57. Dr. Parker.

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* Quoted in Dr. Buck's Essay on this subject, and introduced into statistics.

† This case was not obtained in time to be incorporated in the statistics.

ART. II. *Transactions of the Kings County Medical Society.* Prepared by a Committee of Publication.

APRIL—*Rupture of Uterus.*—DR. LANDON related a case of Ruptured Uterus. About a month ago he was called in haste to attend a woman in Plymouth street, who was reported to be dying. He found her almost pulseless, faint, gasping with a sighing inspiration ; she had been in active labor for 24 hours ; the pains had been severe up to 8 o'clock that evening, when they ceased. An examination showed the head was impacted in the superior strait, the uterus was flaccid, and the feet could be felt in the left side of the abdomen. The forceps were applied, and with great difficulty the delivery was effected. Diffusive stimuli—brandy and carb. ammonia were administered, but she died about 1 o'clock, A. M.; the rupture having occurred at 8 o clock in the evening. An autopsy was held the next day, which verified the diagnosis. The rupture was on the posterior portion of the right side of the uterus, extending from the lower portion of the cervix half the length of the organ.

DR. MITCHELL stated that this was an interesting case, from the rupture occurring at so low a point. It usually occurred higher up.

Albumenurea.—Dr. Landon detailed a case of albumenurea occurring in his hospital practice. The patient was admitted in an anasarcous condition, with his urine loaded with albumen. The treatment consisted in the use of the hot-air bath, blue mass in small doses, and the bowels kept soluble with small doses of rhubarb and soda. Under this treatment, his condition improved to such a degree that he appeared the picture of health. The albumen entirely disappeared from his urine ; his step was strong and firm, and his cheek was ruddy. He eloped while in this condition, and in a week he was brought back to the hospital in an almost moribund condition. He stated that he had passed no water for three days ; the catheter was introduced, and only a few drops of thick fluid withdrawn. His limbs and body were œdematous ; but his mind was perfectly clear. He died soon after. The autopsy revealed enlargement of the kidneys with fatty degeneration. The case presented two points of considerable interest. The sudden death following an apparent cure ; and 2nd, his mind being so perfectly clear when urea must have been circulating in the blood.

Dr. Mitchell stated that the urea was frequently secreted in an almost solid condition, and that corrosive sublimate would often reveal the albumen where heat and nitric acid failed to indicate its presence.

Dr. Landon, in the treatment of these cases, approved of the use of the hot-air bath, with the blue mass in small doses, the bowels being kept open with rhubarb and soda. He had seen the most beneficial results in one case from the use of large doses of tannic acid.

Dr. Landon related a severe case of eczœma impetiginodes, in which complete cure followed *vaccination*, when he had tried other remedies without success.

Dr. Enos related a case of eczœma impetigniodes in which he had tried vaccination without success.

Dr. Enos spoke highly of the results obtained in the treatment of syphilitic condyloma with tannic acid. These excresences, which are usually removed, or destroyed with nitric acid, causing great pain to the patient, he had found the use of the strong solution of tannin would completely cure. He used a solution of ʒ of tannic acid to ℥ of water.

Dr. Enos also detailed a case of albumenurea and cardiac disease, in which the specific gravity of the urine was 1040. He had consulted the various authorities, and had found only one case of albumenurea recorded in which the specific gravity was anything like that in this case. That was recorded by Golding Bird, where the specific gravity was 1051.

Compound Dislocation of Elbow joint.—Dr. Enos detailed an interesting case of compound dislocation of the elbow-joint. The humerus was thrown forward and completely denuded. The dislocation was easily reduced, but the patient had had several attacks of erysipelas, and several portions of necrosed bone had been removed. He will recover with the arm in a flexed position, anchylosed. He would expect a much better result in these cases from immediate exsection of the joint. He had a case of compound dislocation of the elbow, three years years ago; repeated attacks of erysipelas followed, and the arm was finally lost. If he had another case he should immediately exsect.

Dr. Johnson was in favor of exsection in these cases, if the main arteries and nerves were uninjured. The best results that could be hoped for in cases of compound dislocation would be partial or complete anchylosis, while in cases of exsection the patient ultimately regained a joint nearly as good as the original. He was much pleased with the result of a case of exsection performed by Dr. Stephen Smith, while he was resident surgeon in Bellevue Hospital. In that case there was caries of the olecranon. Exsection was performed, and so perfect a result was obtained that the girl went out to do general housework, and the family was not aware that there was any difficulty about the joint. Miller and modern surgeons approved of exsection in compound dislocation when the large vessels and nerves were uninjured. He had a case in some degree illustrating this in his service at the Long Island College Hospital, in which a barrel of flour had fallen upon the hand of a woman. The chimes of the barrel had laid open the metacarpo phalangeal articulation of the thumb and three fingers, and comminuted the ends of the bones. The injury was so extensive that immediate amputation was proposed. In this case the ends of the bones were removed, the tendons trimmed away, the lacerated edges of the wound trimmed, approximated and dressed as an ordinary incised wound. A slight sloughing of the flap occurred, but it granulated and passive motion has been established which will undoubtedly give her a good use of the hand. He regarded this as far preferable to amputation.

Purpura Hemorrhagica.—Dr. Dudley narrated a case of a woman who had been under his charge for seven years, with recurring cardiac disease, the result of rheumatism. This year the rheumatism ceased troubling her, and purpura hemorrhagica had appeared. Dr. Mitchell had seen her in consultation. The treatment had consisted of quinine, and iron, and turpentine. Bullæ appeared in the mouth, and the spots of purpura were very large, appearing on the left shoulder and arm; one of the spots on the nates was so large that it could hardly be covered with the two hands.

Hemorrhage from the Bowels.—Dr. Enos stated that he had a large number of cases of hemorrhage from the bowels—six cases in ten days. One was a little child seven months old, which seemed troubled with indigestion, without much fever, no tenesmus, but with from six to twenty stools a day, and passing blood with each stool. The child died. The autopsy revealed intense congestion of the whole of the large intestine, but no ulceration. In another case he had found large clots of blood passed by the stools which must have coagulated in the large intestines, as they bore the marks of the sacculi.

Periostitis of upper portion of Femur.—Dr. Johnson reported a case showing the extreme difficulty in forming a correct diagnosis. The patient was a young lady of about nineteen years, with light hair and blue eyes;—some time ago she fell, striking on the hip;—she had been cupped by the physician who had attended the case. The difficulty was not relieved. Some two months ago, Dr. Johnson saw the case, it had then all the symptoms of morbus coxarius of an advanced stage. The characteristic malposition of the limb noticed in cases of morbus coxarius, was marked in this case. The limb was flexed at both hip and knee joints. The knee was turned inward, overriding the other knee. The tendons of the adductor muscles of the thigh were strongly marked and tense. The patient was unable to bring the heel down to the floor; the toes turned inward toward the instep of the opposite foot; the hip was full and the integuments swollen over the joints; the natis of the affected side was flattened; pressure over the affected joint gave intense suffering; rocking of the limb or crowding the femur against the acetabulum caused such intense suffering that the patient would not allow it to be touched, for fear we should move it. The pain was ordinarily felt in the knee joint, and at times this was so severe that it was hardly possible to persuade her that the knee joint was not diseased; she had those sudden darting pains at night, awaking from her sleep with a shriek—pains, which by some, are regarded as diagnostic of morbus coxarius, and these were so intense that anodynes administered in large doses, failed to produce sleep.

Dr. Mason saw the case in consultation. The patient was brought under the influence of chloroform and the limb again examined; it was as immoveable as before, carrying the pelvis with it when the femur was rocked; the adductor muscles were tense and unyielding. With Dr. Mason's approval, Dr. Johnson introduced a small trocar into the joint, for the purpose of drawing off the accumulated fluid, and which otherwise must gain an exit by ulcerative destruction of the articulation. To their surprise, no fluid was discharged through the canula, which was immediately withdrawn and a seton introduced posteriorly to the trochanter major, and the use of anodynes and tonics with animal food directed. The seton was moved daily, and soon a profuse discharge took place, so exhausting to the strength of the patient, that it was thought advisable to remove it. The swelling around the joint greatly diminished; the nocturnal pains. however, continued, and the pain in the knee. The leg becoming further drawn up so as to completely override the other. The limb continuing to become more and more flexed, it was determined, upon consultation, to divide the flexor muscles, and continue the operation upon the joints as should be found necessary upon a minute examination under chloroform. Drs. Mason, Whaley, and Peck, present. The patient was brought into a state of complete anesthesia, when it was found that the limb could be moved more freely than before the use of the seton, while the swelling had so much subsided as to no longer obscure the diagnosis, as the trochanter major and shaft of the former were much thickened, while the capsula of the joint was not distended. It was concluded that the former diagnosis was erroneous, and that, instead of morbus coxarius, it was a case of periostitis of the upper portion of the shaft and the trochanter major. The operation was, therefore, changed, and a simple incision made over the trochanter major through the thickened periosteum down to the bone, and continued some two and a half inches down the shaft. The periosteum was found to be some one-eighth of an inch thick, and bony material thrown out around the trochanter major. The adductor tendons were then divided with slight extension of the limb. It has come down to the same length as the other. The discharge from the incision and the whole appearance of the case indicate a rapid recovery.

Retention of a portion of Placenta subsequent to Miscarriage.— Dr. Mason reported the following case:—Mrs. B., of the city, menstruated the last week in February, 1858, and was delivered of a fœtus on the 18th of June, following; about fourteen weeks after conception, reckoning from two weeks after the completion of the last monthly period. In my absence, my friend, Dr. Hutchison, saw her, and found that the fœtus and the ordinary amount of coagula had been expelled; but the cord which hung loosely in the vagina, came away on a *very slight* traction, *without the placenta;* and no portion of the placenta could be reached. The uterine contractions having almost ceased, Dr. H. directed the *infusion* of spurred rye, to be given in full doses. This had, however, little effect, except to *nauseate* the patient and to produce slight vomiting.

In this condition, I found Mrs. B. on the morning of the 19th. She had discontinued the ergot, and was comfortable, but *no placenta* had been seen by patient, or *nurse;* and on examination, none was discovered in the vagina or os uteri. The conclusions arrived at in conference with Dr. H., was that the after-birth must be still within the uterine cavity, and that the *tincture* of ergot, in full doses and at short intervals, should be *substituted* for the infusion. Several ounces were accordingly taken, within the next seventy-two hours, and although readily retained by the stomach, produced but little *specific* effect. The uterine discharge, however, gradually diminished. There were no sanious, purulent, or offensive evacuations; no fever; no constitutional irritation. The appetite and strength returned, and the general health after the expiration of two or three weeks improved.

This was to me a novel case, the only one of the kind which, in a somewhat extended obstetrical practice, I had seen. I have learned that since the occurrence of this case, a similar one had been observed by Dr. Hutchison, and reported to the Pathological Society of New York, and none of the members present had met with a similar occurrence. I have, moreover, from another source, been informed that Dr. Gardner, of New York, reported a case some years since, to one of the associations of that city, in which the placenta of one child was retained until the birth of a second child, and then both placenta were expelled.

Since the above was written, I have found in the *Buffalo Medical Journal*, the following case reported to the Buffalo Medical Association. by Professor Rochester. "The patient was delivered "*twenty* days before, after a protracted and difficult labor. She "had suffered from diarrhœa for two or three days before her "confinement, and was afterwards attacked with dysentery, "which terminated fatally on September 6th. On post-mortem "examination, the uterus was found much larger than usual at "that time after delivery, and its cavity was occupied by a por- "tion of *adherent placenta* about three inches long by one inch "broad and one in thickness. *This was very closely adherent*, "and it required considerable force to break it away. There "was *no evidence* of *decomposition* in the mass. The observa- "tion seemed interesting as *showing the length of time a portion* "*of placenta could be retained without undergoing disintegration*" In this case the other portions of the placenta had been discharged spontaneously.

The patient was, however, directed to observe great care to avoid fatigue and exposure, and to apprise me at *once* should there occur any untoward change in her case. Nevertheless, finding herself gaining in health, she disregarded my injunctions, traveled to the country beyond Albany, and on her return engaged in active household duties, and walked at least once, to the lower part of the city from near Clinton avenue, a distance of one and a half to two miles. Soon after this, on the 5th October, she applied to me on account of the discharge from the vagina, which had again somewhat increased. She now informed me that it had *never wholly* ceased; at intervals, had been quite free, and nearly the whole time had been about as large in amount as was usual at her catamenial periods.

I now again prescribed for her, teaspoonful doses of *tr. ergot*, hoping to cause by its specific influence, the expulsion of whatever substance within the uterus might keep up the hemorrhage. In three or four days, sharp expulsive pains occurred, and continued for *two days*; when on the 11th October, a body about *one* inch and a quarter in length, and three-quarters of an inch in each of its other diameters, escaped from the vagina, *one hundred and fourteen* days after her miscarriage. This had the appearance of a *portion of placenta just separated from the uterus*, and when examined with the microscope, exhibited the *peculiar digital* structure of that body. This, then, was a portion of the placenta which had retained its connection with the walls of the uterus, and had acted as a foreign body so far as to keep up a constant hemorrhage.

May.—*Pneumonia and Pleuro-pneumonia prevalent.*—Dr. Brown had noticed an unusual number of cases of pneumonitis and pleuro-pneumonia, in some of which the *rusty sputa* was observed which he regards as a rare occurrence in Brooklyn. The experience of Drs. Cooke, Enos, Marvin, and Mitchell, coincide with that of Dr. Brown as to the unusual prevalence of inflammation of the lungs, and infrequency of that form which manifests itself by rusty sputa.

Sulphate of Iron in varicose veins.—Dr. Enos related the case of a man about 50 years of age, with ulcer and varicose veins of the leg. The veins were exceedingly tortuous and irregular. extending over the inner side of the leg, and upon the thigh. There was such an intricate mesh of veins, that the case did not seem a good one for treating with *pins*, and he thought to inject the veins with the perchloride of iron, as recommended by M. Pravay. Knowing the styptic properties of *persulphate of iron*, he tested the comparative powers of the perchloride. and of the persulphate on blood recently drawn, and found but little difference in the *time* necessary for coagulation. but the clot by the *persulphate* seemed more *firm* and *adhesive* than the other. It seemed, therefore, that the *persulphate* would answer better from its being less irritating, and producing a more permanent clot. He injected a few drops into a large vein on the inside of the knee, taking the precaution to make pressure, with a little compress, above the point of operation, until after the coagulum was formed. The clot formed promptly, but little irritation followed, and resulted in the obliteration of the vein. A few days after he injected a few drops in another place which had the effect of obliterating the vein almost entirely, and to such an extent, as to make any further operations unnecessary. There was but little irritation, and none of the glandular swelling sometimes seen after the injection of the perchloride of iron. So far as he is informed, this is the first time persulphate of iron has been used for this operation, and he thinks it will prove a better preparation than the other.

Ununited fracture treated by the drill.—Dr. Enos also related the case of a woman about 30 or 35 years of age, of intemperate habits, with ununited fracture of the bones of the leg. Both bones were broken in June last. There was no difficulty in coaptation, and the fracture was put up in the usual way. After a proper time, the splints were removed, and it was found that union had not taken place. Friction of the ends of the bones against each other, and the cold douche were used, needles were introduced, and a current of galvanism passed through them, but without effect. About a month ago, he bored through the ends of the fractured parts in several directions by means of a drill, as recommended by Dr. Brainard, of Chicago. The patient was benefited by the first operation, which was repeated about two weeks afterwards, and it will probably suffice to effect a cure. Dr. Brainard was in the habit of repeating the operation every ten days. The failure to unite, was undoubtedly due to the bad constitution of the woman, induced by intemperance, and improper food.

Carbuncle.—Dr. Cooke reported two cases of carbuncle that were peculiar from their great size. One in an old man, of which the extent was seven inches long by five inches wide. Another was in an old lady, it was of a circular form, about six inches in diameter. In both cases the carbuncles are situated on the back, in one immediately beneath the scapula, and in the other still lower down. Both were treated with free crucial incisions, and with fair prospect of recovery.

Dry Gangrene.—He also reported a case of dry gangrene in a man 75 years old, commencing in the toe, and extending to the foot. It is unattended with pain or fever, and the only dressing was yeast poultice. There is no perceptible ossification of the artery.

Dislocation and fracture of humerus.—Dr. Johnson reported a case of dislocation of the humerus, and fracture of the surgical neck, which was first reduced and then the fractured parts put in position, and so treated as to result in a cure with little deformity, and but little restriction of the natural motions of the limb.

Amaurosis cured by the suppuration of the glands of the neck.—Dr. Isaacs reported the following case:—A. M., a tailor æt. 45, of good constitution and temperate habits, consulted me about the first of January, 1859, on account of a partial amaurosis, which had existed for the last eighteen months. He said that he had been troubled during this period with muscæ volitantes, and occasionally flashes of light before the eyes, and photophobia, so that he could only see to work in a room somewhat darkened. There was much indistinctness of vision, and occasionally pain in the eye-ball, and back of the neck. Sometimes the pain was circumorbital. The appearance of the eyes was almost, or perhaps quite natural. He attributed his disease to working upon black cloth, very constantly, during the day, and also at night. *Treatment*—abstinence from his work, regulation of the bowels, pill. hydarg. cum opio, followed by iodide of potassium, and subsequently by quinine: a thread seton in each temple, and a blister to the back of the neck. Some weeks after, a seton was there inserted, which he wore about six weeks. Under this treatment he improved considerably, and in every respect. He now resumed his work. One day while sitting on a table, in a very warm room, between a large stove and the door, this door was left partially open by some person, without his notice, and the side and back of his neck were exposed to a small, but strong current of cold air, for several minutes. On the next day he complained of pain, stiffness, and swelling. in the side and back of the neck. In forty-eight hours from the time of the accident, the lower cervical glands and surrounding tissues, above the right clavicle, were greatly swollen and enlarged, forming a tumor much larger than a goose egg. The integuments were distended, shining, and exceedingly painful upon the slightest touch. There was severe headache with fever, and very great constitutional irritation. The seton was instantly removed. In spite of leeches, anodyne applications, and general antiphlogistic treatment, profuse suppuration took place in about two weeks; and at the end of six weeks from the occurrence of the accident, the parts had apparently returned to their natural condition. *Since the occurrence of the suppuration, his eye sight has astonishingly improved.* His general health is also much better. He has again resumed his work, which he is now able to pursue with much satisfaction. The case is interesting, as showing the direct influence of cold upon a part, and the beneficial effect of severe counter irritation and suppuration, which resulted in consequence of its application.

Jarvis' Adjuster.—Dislocation of the os brachii.—Dr. Ball had very lately reduced two dislocations of the head of the humerus by Jarvis' Adjuster; both of which had existed for the period of one month, and in each instance several attempts at reduction had been made by all ordinary means without avail. One case occurred in a young man, and no difficulty was experienced after resorting to this instrument; the other, in an older man, aged about fifty years, where great force was requisite to tear up the attachments, but by placing a pad in the axilla for a fulcrum, power was gained, sufficient to overcome all resistance, and the bone was replaced. In each instance, the perfect use of the arm was regained. By the advantages afforded by this mechanical appliance, he had succeeded in affecting reduction in one case as late as six months after the accident.

Tartar Emetic in cerebral congestion during scarlet fever.—Dr. Chapman related a case of scarlet fever in a child ten years of age, in the which the eruption appeared faintly, like punctated points, without the bright efflorescence, and diffuse redness so characteristic of this exanthem. During the night of the third day, cerebral symptoms were developed: contracted pupil, intolerance of light, tinnitus illusions of sight, and hearing; great heat; maniacal delirium, etc. Antimony was prescribed without regard so much to quantity as effects. To insure its full action, it was ordered in divided portions every fifteen minutes, until emesis followed, and afterwards this impression was continued, by as large doses given every hour as the stomach could be made to tolerate. In addition to this treatment, iced water was applied to the head continuously; the feet were put in mustard and warm water every three or four hours, and eight leeches were applied behind the ears on one occasion, and six on another. The contra stimulant, depleting treatment, was pursued in the same manner as it would have been in a head affection arising from other causes, and with the most happy results. He remarked, that whatever means we might select to relieve the congestion, in his opinion, the antimony was the most powerful and efficient agent; known to us, in combating and subduing congestion and inflammation of the brain in its inceptive stage. With the same views, he had employed it extensively in convulsions, infantile, hysterical, and puerperal, and in the stage of reaction following concussion of the brain. Its power was marked, and its effects more decisive than any other remedy.

Dr. Ball stated that he had for a long time used the antimony in the same cases, in the same doses, and in convulsions, etc., as represented by Dr. C., whose statements he confirmed by his experience.

Miliaria.—Dr. Heiser had recently seen four cases of miliaria, apparently idiopathic affections. Two of these were in one family. The fever was high; the pulse rapid, and the remissions and exacerbations frequent. German authority, of note, considers there is a rheumatic element present in the blood in such cases, and that the vesicular eruption is but a manifestation of this diathesis. In his native country, some two hundred years since, an epidemic of this disease prevailed extensively.

Golden Sulphuret of Antimony in pneumonia.—Dr. Simms stated that he had used this remedy with signal success in a case of consolidated lung remaining after pneumonia. The pneumonia in its active form, yielded readily to the ordinary remedies. Directly after empyema followed, which also was happily removed in a short period, but still a consolidation of the lung remained, that resisted the systematic use of antimony and calomel, both of which were continued for some time. He now made trial of the G. S. of antimony (gr. i.) with cannabis indica (grs. v) in powder. The lung under its use rapidly regained its functions; and this result was, in the doctor's opinion, greatly promoted, if not produced, by this medication.

Atelectasis Pulmonum.—Dr. Mitchell reported the following case.—On the 25th of October, 1858, I attended Mrs. ——— in confinement with her fourth child. The mother, though of feeble constitution, was in good health, and the labor terminated naturally. The child cried gently, and was handed to the nurse, as "without deformity, and in all respects perfect."

During the next three days, my attention was directed more particularly to the mother, she being greatly exhausted by *post-partum* hemorrhage, and I knew little of the child, except that it appeared well, took its food freely, and was *very quiet.* I observed an unusual rapidity in its breathing, but not enough to excite apprehension, supposing that the complete development of the lung would soon be accomplished, as I had seen in several previous instances. At the end of a week, this symptom still continuing, the child was examined with more care. The respiration was about one hundred per minute. There was no cough, nor moaning, nor other evidence of pain in breathing. The respiratory act was short and superficial, *never* deep or long. The chest, like that of its father, was more than ordinarily full at its upper part, across the upper third of the sternum. The complexion of the whole surface was *very white* from its birth, contrasting with the red and mottled color of newly born children. Its muscular movements were not remarkably languid or feeble. It cried but little, and never noisily. It slept well; its food was taken readily and freely from a nursing bottle, and was well digested. The alvine evacuations were natural.

It continued slowly to increase in strength without losing flesh, but the frequency of the respirations became more and more obvious, and in the course of a month, was so marked, as to attract the notice of all who saw it.

During the following two weeks, the child, though apparently healthy, and nourished by a wet nurse, grew thin. The respiratory movements had increased in frequency, and were more labored, but seemed in no degree to interfere with his comfort, or diminish his playfulness. On viewing the exposed chest, the observer could not but be struck with the deep depressions formed in the neck, at each inspiration, about the insertion of the sterno mastoid muscle, especially that at the head of the sternum. Synchronous, with the inspiration, and caused by it, the lower ribs, instead of expanding, were seen to be contracted inwards, as were also the intercostal muscles, as if a large cupping glass were applied to the inner surface of the lower thoracic walls. A symptom that may be regarded as diagnostic.

On *percussion*, the upper half of the chest, both before and behind, was sonorous, but more so at the right than at the left. The lower half, posteriorly, was much less resonant, especially on the left side. The respiratory sounds were puerile in the upper half, and feeble in the lower posterior regions; but throughout, more feeble on the left than on the right side, showing the superior lobes to be more developed than the inferior, and the right lung more than the left.

Dr. J. M. Smith saw the child in consultation, and after careful examination, confirmed the diagnosis previously made, of congenital atelectasis of the lung.

With no other treatment than attention to general health, the rapid breathing gradually diminished, until the number of respirations was less than sixty a minute.

The child is now five months old, and weighs fourteen pounds. The sonorousness of the chest is considerably increased, but there is still marked dullness in the posterior inferior regions. The respiratory sounds in the corresponding portions of the lungs are stronger than they were three months ago, but less distinct than natural. The chest presents anteriorly a perfect example of the "Pigeon breasted" form.

As to prognosis, it may be reasonably expected, that the lungs will eventually assume their normal expansion, and that the patient will attain his full health and physical development.

The history of atelectasis pulmonum is so brief, compared with the number of cases that have come under my own observation, that I am led to think that many pass unrecognized, and that some, at least, are fatally treated under a false diagnosis.

This condition is interesting, not only from its own nature, as interfering materially with the robust growth of the child, and sometimes in itself proving a cause of death, but as constituting an unfortunate complication in thoracic inflammations, and largely increasing the chances of a fatal termination.

Encephaloid Disease.—Dr. Enos reported the following case: —Mr. C.—Æt. 66.—was a prominent and well known gentleman of Brooklyn of polished manners and a well cultivated mind. His habit had been correct, and his general health good till within the last two years. In March, 1858, he began to complain of a dull pain in the left hip. It induced him to walk with a cane and favor the left limb a little. Appearing to be rheumatic the iodide of potassium was given. Soon after he had pain in the right shoulder and clavicle. In the latter part of April, 1858, while taking off his under shirt he snapped the right collar-bone at the juncture of the middle and outer third. I saw him two days after. The part was somewhat swollen and reddened and very painful. There was no deformity, the fractured ends being held together, probably by the unruptured periosteum. The lack of the usual deformity in this fracture and the inability to get crepitus, probably from effusion between the broken ends, and on account of the extreme tenderness of the inflamed periosteum, I did not at that time detect the fracture. Being absent from the country from May till November, I saw him next on the 22d of the latter month. He then had excruciating pain in the left thigh and leg—along the sciatic nerve. At the point where the fracture was in the clavicle there was developed a soft tumor fluctuating to the feel, about the size of a turkey's egg. His suffering was very great, especially at night, so that opiates had to be freely given. Sometimes the pain was allayed by cloths applied, saturated in chloroform liniment, or tinct. aconite and covered with oiled silk. He was obliged to sit in his chair night and day; any attempt to lie down aggravated the pain: his lower limbs became œdematous; the skin on his feet and legs ulcerated and burst and discharged serum freely: no pain in the shoulder; his appetite good and bowels regular: urine high colored, offensive and sometimes bloody. His uneasiness and suffering were so great that he had to be assisted almost constantly. He sat in his chair from October to April last. On the 26th of March while changing his position from one chair to another he broke his right thigh. The pain in it soon became so great that a person had to hold it steady night and day. There was no deformity, as he sat with his feet on the floor—the thigh was straight. It was so tender he would not let it be examined. On the 6th day after the injury the middle of the thigh was observed to sink down suggesting to the eye that the thigh was broken. The muscles too acted spasmodically as when irritated by broken bones. It became necessary therefore that the patient should be put in a horizontal position and the limb dressed. This was done under the influence of chloroform. The thigh was placed upon a double inclined plain, as union was not expected to take place, and this position was the most comfortable. There was no effort made to prevent shortening. The bed was very uncomfortable to him, and he begged piteously for a week for chloroform, and it was given occasionally, but it made him so delirious that we desisted, and gave opium as before. McMunn's elixir, laudanum, and hoff. anodyne or pulv. Doveri—the pain in the broken thigh soon after it was dressed diminished, and almost ceased soon after, but he would frequently complain of the *left thigh*, and the corresponding *tuberosity* of the ischium. Bed sores formed and he had to be raised with great care, to have them dressed. While this was being done on the first of May the right humerus broke in the middle, this was dressed with an augular splint. The œdema in the lower limbs disappeared and they as well as the whole body became very much emaciated. He took but little food during the few weeks of his life; he sank slowly, and died on the 18th inst.

Autopsy—The tumor in the shoulder occupied the place of the outer third of the clavicle, and proved to be a mass of encephaloid disease developed evidently in the bony tissue. The same disease was developed at the point of fracture, in the broken femur and also in the humerus. The lungs crepitated but scattered through them were little bodies, which on being opened were found to be cancerous. In the left kidney was [a mass of soft cancer surmounting its upper part, as large as a small fist, with a large clot on its summit. In the right kidney were small uric acid calculi, some serous cysts on the surface. The seventh rib on the left side was broken near its cartilage, and an encephaloid mass as large as a turkey's egg occupied the place, and projecting into the cavity of the pleura. A small tumor the size of a hickory nut was developed in the head of the sternum, near the junction of the first rib. Pulsation in this tumor had been distinctly visible to the eye, and very perceptible to the touch. The tumor did not extend into the medeastinum, though the bone was perforated by it. An encephaloid mass as large as a double fist occupied the internal surface of the left iliac bone, which was also destroyed at this point. The sacrum was made ragged by the disease and communicated with the bed sore posteriorly.

JUNE.—*Intermittent Fever.*—According to the observation of all the members present this disease is much more common, and far less amenable to treatment than usual at this season of the year.

Some cases have occurred in parts of the city which have heretofore been exempt, but it has chiefly prevailed in the *vicinity of the excavations* for the *water pipes* and *sewers*. The largest proportion of cases occurring in the neighborhood of the deep excavations on DeKalb avenue, East of Washington Park.

Many of these cases are reported to be analogous to the masked intermittents or *dumb agues*, more common to Southern latitudes, and most of them resist the ordinary treatment by quinine for several weeks. In discussing the treatment of intermittents when the ordinary means fail, Dr. Cook states that he has usually succeeded by giving large doses of muriated tincture of iron, one dose of a fluid drachm just before the time of expected chill, and where this is irregular, the same quantity several times a day.

Dr. Dudley has also used the same remedy, but oftener the citrate of iron and quinine, with good success.

Dr. Johnson stated that Dr. Loins and Dr. Benj. Drake, were in the habit of giving quinine and tartar emetic—sixteen grains of the former, to one grain of the latter dissolved in two ounces of water, of this a teaspoonful every hour up to the time of the expected chill, was a *certain* remedy.

Dr. Isaacs related a case of obstinate intermittent fever contracted in Florida. The chills were very long and very severe—pains in the limbs excruciating, with delirium. The patient was very feeble, and much prostrated by previous attacks—when he first saw him, the chill was expected to occur in half an hour, and from the history of the case, and appearance of the patient; there was great reason to fear that if this chill was not prevented, that he would probably die in it. As there was no time for the operation of the usual remedies, as soon as the symptoms of the approaching chill became evident, *tourniquets* were applied to the four extremities, so as to arrest the circulation in the brachial and femoral arteries, and alcoholic stimulants were administered. The chilly sensations were very slight, lasting only about ten minutes, and were then succeeded by heat of skin, followed by profuse perspiration, afterwards quinine was administered, with the other usual remedies, and the patient recovered.

Dr. Bell stated that in the "*fievre pernicieuse*" of the American tropics, where the congestive stages is highly dangerous and usually fatal on the second or third recurrence of the paroxysm, he had frequently cut it short on the eve of the chill by quinine and piperine in very large doses—a drachm of quinine and a scruple of piperine, given at one dose. But although he had frequently had his ingenuity taxed to the utmost in the treatment of these severe forms of intermittent, in various regions, he had generally found them curable—which was *not the case with some* of the *now prevailing intermittents of Brooklyn*. His experience had been like others in the severe forms of the ordinary type of this disease, viz., that when quinine failed, by combining arsenic or piperine it could be cured. But there were cases now in the Brooklyn City Hospital which had been repeatedly arsenicated, yet in less than a week the paroxysm would recur, and most of them would run three weeks, no matter what the treatment, while others would last twice as long. In several of these cases, he had used tartar emtic to free emesis, and as a nauseant in combination with opiates, but to little purpose. The disease would be relieved only for a day or two, while the treatment which relieved it was more intolerable than the disease. Oil of turpentine, with which he had sometimes been successful after the failure of quinine, had also been tried without benefit. He was glad to know that there was a cure in the use of *drachm* doses of *muriated tincture of iron*, which he had never given in such large doses, but he would lose no time in giving it a trial. He found, however, that notwithstanding the cases could not be *cut short* by quinine, they were nevertheless *influenced* by it, the cases in which it was used, being milder than those where it was omitted.

Dislocation of Cuboid bone of left ankle.—Dr. Bell stated that this accident occurred to a married lady of relaxed fibre, who had been in bad health for several years. Engaged in moving, in the latter part of April, she was carrying some light article of furniture from the doorsteps to the cart, when she caught the outer side of the foot against the projecting edge of a flagstone, and so stumbled as to bring the weight of her body on the outer or upper side of the foot. The pain was so great as to cause immediate fainting. It occurred in the evening, and I did not see her until 9½ o'clock next morning. She had suffered much pain in the injured part, and had slept but little. The foot and ankle were much swollen, with a distinct prominence of that portion corresponding with the inner edge of the cuboid bone in its normal state. The articulating surface of the 5th metatarsal bone was carried up with the cuboid, leaving a distinct hollow under the place of its normal position, and giving the foot a twisted appearance downwards and inwards.

The injured part was exceedingly painful on the slightest touch, and once during the night, from attempted rubbing, it being deemed a sprain, she fainted—as on first receiving injury.

My examination was chiefly made while she was under the influence of chloroform, by means of which I was enabled to reduce it. To effect reduction, I forcibly bent the foot in the line of deformity, at the same time pressing hard with the palm of the hand on the protuberance—an assistant holding the leg. The bone slipt in its place with a distinct chuck, which could be heard at the distance of several feet.

Applied no dressing; ordered rest for a few days, and at the end of two weeks the lady was attending to her household duties without limping.

ART. III.—*The Operation of Turning by External Manipulations, Considered from a Historical and Practical Point of View. With Cases.* By E. NOEGGERATH, M.D.

Introductory.—Having recently had my attention called to the practice of turning the fœtus by external manipulation, I propose to give a historical and practical sketch of this operation. I think it important to call anew the attention of American practitioners to this operation, which is, I believe, too little thought of, and too little practiced, or perhaps not sufficiently appreciated in this country. The reasons for this neglect are many. The handbooks of obstetric science, which are consulted by our practioners belong to the English school, and among these Ramsbotham's work enjoys the greatest confidence. Most of these text books, and particularly the latter, seem to attach very little importance to this operation. Ramsbotham even goes so far as to deny the practicability of its performance, because he does not believe that the position of the fœtus in utero could be made out by external examination alone. This opinion has been endorsed by many of the leading physicians in the United States. The question as to the comparative value of external and internal examination of pregnant women for the purpose of arriving at a knowledge of the position of the fœtus has been discussed frequently by the best authors on obstetric medicine, and we may well divide the history of this practice into two periods, viz., that before and that after the application of ausculation to the diagnosis of pregnancy.

Before this time opinions were somewhat divided, but the majority relied upon internal examination. Still even at this time two of the greatest German accoucheurs, Wigand and W. Schmidt undertook with the happiest success to point out the vast importance of external examination. The latter even went so far as to declare that "it was often of much greater value than internal examination." (See W. Schmidt, *Sammlung zweifelhafter Schwangerschafts fälle—a collection of cases of doubtful pregnancy*, Wien, 1818.)

But when Dr. Mayor of Geneva, and Dr. Lejumeau de Kergaradec (1821) first demonstrated the possibility of perceiving the sounds of the fœtal heart and the placental souffle, when Paul Dubois, Laennec, Kennedy, Naegele, Hohl, Depaul, and many others, had not only confirmed their observations but even turned them to practical account, the value of external examination for the purpose of detecting the position of the fœtus was established for all time to come. And now a-days all reliable authors (Wigand, Nægele, Kilian, Hohl, Depaul, etc. etc.,) who have a chapter on this point agree as to the possibility of making out the position of the fœtus by this means alone in the greater number of cases. From my own, not very limited experience, I must freely confess that if I should be asked to make a diagnosis in a case of transverse presentation, at beginning of labor by one method only with the exclusion of the other, I would rather dispense entirely with the internal than with the external examination. This is true of the great majority of cases, while in some few instances the thickness of the abdominal walls, or the tenderness of the womb, or the undue mobility of the fœtus exclude the chances of a satisfactory external examination.

But the conviction of being able to recognize the presentation of the fœtus in this way, could not be a sufficient inducement to engage obstetricians to change the position of the fœtus by external examination. It was another proceeding executed by nature without the interference of accoucheurs, that induced them to change the position of the fœtus from its orignal situation. The history of *spontaneous version* from the earliest periods to this day records numerous observations which show that before or even during labor the fœtus may spontaneously change its former position and present with the head or the breech.

The first case of spontaneous version is recorded in the Holy Bible, Genesis Chapter 38, v. 28. The arm which first presented in the delivery of Tamar, belonged to Zarah, who was born after Pharez, in a common head-presentation, the arm following after the birth of the head in the usual way after it had reëntered the uterine cavity. From that time up to the present day we are in possession of numerous accounts of the occurrence of this interesting phenomenon, among which those recorded by Denman, Douglas, Gooch, Burns, give the most satisfactory explanation of the fact, and now-a-days we rarely meet with an obstetric hospital report where its occurrence is not mentioned. Thus Dr. C. Braun of Vienna (see his *klinik der Geburtshilfe*, etc., Erlangen, 1855) states that it happened 19 times during the last three months of gestation and twice at the beginning of labor in a number of 7,835 births occurring in one year.

It was the combination of these two circumstances, viz., the established fact of spontaneous version, and the perfection of external diagnosis which induced accoucheurs to try turning by external manipulation and bring this operation to a scientific standing.

History of the operation.—Although the medical system of our days is based in its larger outlines upon the doctrines of Hippocrates, that portion of our science which belongs to obstetrics has somewhat emancipated itself from the rules laid down by its master, and although we shall show that turning by external manipulation was proposed by Hippocrates, we may add that our proceeding is so entirely different from that in use by our common master as to leave little in common but the name. In *De Mulierum morbis*, Lib. I. cap. xciii. 9, Hippocrates has the following words: "Lectum altum, robustum ac instratum sumito, et mulierem supinam reclinato, etc. Elevent autem duo viri ex utroque pede, hinc atque illinc, quo indirectum lectus cadat, plane ac aequaliter, et convulsio ne fiat. Concutiendum est autem maxime una cum partus dolore, et si quidem discedant, statim quiescendum. Sin minus interstitio facto rursus concutito." These directions are for the management of a woman who is in labor with a child in a wrong position. He recommends to shake the woman during every pain, she being placed in a recumbent position with head undermost. In this way the presenting part of the fœtus is intended to fall backwards, thus making room for the head. Although this method was not used to the exclusion of others, it was extensively practised by Greek physicians at that time, and strange to say the same manœuvre is even now employed among the lower classes of midwives in our neighboring State of Mexico. A more rational not to say scientific way of treating malposition of the fœtus is followed at this day by the accoucheurs of Japan, they are in possession of several external manipulations, called *Sei-tai*, *Ambak* and *Auma*, by which the child is turned in utero, and as it seems successfully, because they very seldom have to resort to the introduction of the hand into the uterus. But more enlightened ages could not be satisfied with such rude proceedings; Celsus already conveyed unmistakeable rules as to the management of cross positions by direct manipulations. All traces of external manipulation were, however, lost in the Arab school, and it was not until 1654 when a German accoucheur, Jacobus Rueff, a pupil of Eucharius Roesslin, called anew the attention of the profession to a proceeding which was entirely forgotten. (See : *De conceptu et generatione hominis et ũsquae circa haec potissimum consideratur.* Libri sex congesti opera T. Rueff chirurgi *Figurini.*) But as the other doctrines of this obstetrician were in many points absurd, and as soon after wards the French school, headed by Mauriceau and Delamotte, took the lead all over Europe, Jacob Rueff and his few adherents were scarcely thought worthy of notice. Equally unsuccessful were the attempts of a Roman physician, Signor Scipion Mercurio, to regain the lost ground in 1642.* During the following centuries not one of the obstetric authorities thought it worth while to pay even a passing tribute to this operation.

At length a man stepped forward, and strongly recommended the turning of the child by external manipulation in 1812. It was the great German accoucheur and physician, Dr. Justus H. Wigand, of Hamburg, who published a pamphlet, addressed to the Medical Faculties of Paris and Vienna, in which he gave a report of several cases in which he had performed, and successfully so, this operation. (See: *Von einer neuen und leichten Methode zu wenden etc., in Ej. Drei den medicin. Facultäten zu Paris und Berlin übergebenen geburtshülflichen Abhandlungen,* Hamburg, 1812, 4. p. 35.) Although Dr. Wigand's classical description of the birth of man was only published eight years afterwards, he already enjoyed such a general confidence, that everything which proceeded from his pen, was received with eagerness by the profession. No wonder, then, that turning by external manipulation became now the password; the more so, because it was just the time, when a reaction against the mania of too active interference, was most desirable. The great gift of Wigand, was the power of unprejudiced and available observation, and so it could not eschew his attentive eyes, that nature effected a rectification of a wrong position, by a so-called spontaneous version. This gave him the first idea of his method of turning, as he professes himself, in the article mentioned above. The rules which he taught to follow were so perfect, that soon afterwards a number of successful performances of this operation were reported by other physicians, and, even the *modus operandi* of our time, is just the same as that recommended by its inventor. The first men who directed their attention more especially to Wigand's operations, were Professors Joerg,* Busch,† Naegele,‡ Kilian,§ and many others. All the leading men in Germany pronounced in favor of the new proceeding, and, if anything was left unfinished by Wigand, be it with regard to indications, time of performance, or manipulations, this was completed by his many successors. Not one voice was heard against it. Among the many monographs which appeared at that time, the pamphlet of Professor Martin (*Beitrage zur Gynaekologie,* 2 Heft. p. 3 sequ, über die äussere Wendung der Frucht im Mutterleibe) and of Professor Ritgen (*Das gewaltlose Wenden auf den Kopf oder Steiss nach Wiegand.* In Ej. Anzeigen der mechan, Hülfen, etc., Giessen, 1820). The questions discussed by these several authors, considered the manner in which these manipulations effected a change in the presentation of the child, the different ways they might be most successfully performed, and the most suitable time.

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* *La commare o raccoglitrice dell' Excellentissimo Signor Scipion Mercurio, Filosofo Medico e Cittadino Romano, etc., etc.* Verona, 1642.

With regard to the first point, we will mention Dr. Joerg's,

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* Joerg. J. Chr. G., *Schriften zur Beförderung der Kenntniss des menschlichen Weibes, etc.* Leipzig, 1831.

† Busch, W. H., *Handbuch der Geburtskunde in alphabetischer Ordnung.* Berlin, 1836.

‡ Naegele, F. K., *Lehrbuch der Geburtshülfe.* Heidelberg, 1836. 3d ed.

§ Kilian, H. F., *Die operative Geburtshülfe.* 2d ed. Bonn, 1849.

Busch's, and Kilian's opinion, all of whom, lay great stress on the dynamic effects of this pressing and kneading of the uterus in several places, attributing only a secondary importance to the direct mechanical displacement imparted to the fœtus. The manœuvre itself, and the most convenient time of its performance, will be discussed hereafter.

All the later German authors which we have consulted, pronounce an equally favorable opinion as those of former times. There is not one among them, who has not dedicated a full chapter on turning by external manipulations in his hand-book, highly approving of this operation. The works to which we refer, and which we have subjected to a personal examination, are those of Scanzoni,[*] Rosshirt,[†] Hohl,[‡] Kilian,[§] Lumpe,[‖] Braun,[¶] Arneth.[**] All of them seem to have had personal experience in the performance of this operation. Dr. Braun reports two successful cases. Dr. Lumpe's opinion of this operation is so elated, that he considers its happy performance as a sign of the highest obstetric education and skill. Dr. Arneth asserts that he had changed a cross presentation into a vertex presentation on several occasions. Dr. Scanzoni speaks of the possibility of its successful performance, with a confidence, which shows, that his views are not derived from foreign experience alone, but, above all, it is our gifted master, Professor Kilian, who, with his wonted eloquence, has done more for the final establishment of this operation, than most of his cotemporaries. Finally, we may mention a very able article on this subject, written by Professor Breit, of Tubingen (See Ej. *Geburtshülfliche Abhandlungen in Roser's und Wunderlich's Archiv.* vii. 6–8., 1848). This is a very valuable thesis, containing many practical hints upon the subject. According to his own experience, it is in many cases sufficient to repeat the pressing and squeezing of the uterus only two or three times, to engage the head in the pelvic entrance, when the child occupied, at first, a transverse or oblique position. But to perform this successfully, considerable skill in external examination is the *conditio sine qua non.*

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[*] *Lehrbuch der Geburtshilfe,* von Dr. F. W. Scanzoni, etc. 3d ed. Wien: L. W. Seidel. 1855. Pp. 740–741.

[†] *Lehrbuch der Geburtshilfe,* von Dr. J. E. Rosshirt. Professor der Geburtshilfe an der Universität zu Erlangen, etc. Erlangen: Heyder & Zimmer. 1851. Pp. 565–569.

[‡] *Lehrbuch der Geburtshilfe, etc.,* von Dr. A. F. Hohl, Professor der Geburtshilfe zu Halle. Leipzig: W. Engelmann. 1855. Pp. 720–722.

[§] *Die Geburtslehre von Seiten der Wissenschaft und Kunst, etc.* Von Dr. H. F. Kilian. 2d ed. Frankfurt a. M.: F. Varrentrap. Pp. 164–165.

[‖] *Cursus der praktischen Geburtshilfe, etc.* Von Dr. E. Lumpe, emerirter Assistent an der Wiener Geburtshilflichen Klinik. Wien: Braumüller & Seidel, 1843. Page 74 seqn.

[¶] *Klinik der Geburtshilfe und Gynaekologie.* Von Dr. J. Chiari, Dr. C. Braun und Dr. J. Spaeth. Erlangen: F. Enke, 1855. Pp. 50 and 55.

[**] *Die geburtshilfliche Praxis etc.* Von Dr. F. W. Arneth. Wien: W. Braumüller, 1851. Pp. 69–70.

While thus the German literature abounds with treatises commendatory of turning by external manipulation, we find a deplorable scarcity on the subject among English and American authors; and this is no doubt the principal reason, why this operation is so very little practised on this continent. All that Ramsbotham* has to say about it, is contained in the following words: "It is natural to suppose, that this process (spontaneous version) may be assisted by external manipulation. Thus, Wigand has stated, that it is possible, before the waters have escaped, to change the position of the head, or even the presentations by external, abdominal manipulations." One of the few British authors who allude to it, is the distinguished professor of Glasgow, Dr. J. Burns.† Still he only seems to consider it as an interesting historical fact, and on page 384, he mentions a case, where this operation has been successfully performed by Mr. Buchanan, of Hull. Drs. Churchill, Rigby, and Tyler Smith, have each a very short notice on the subject; neither in the second edition of Meigs' book on Obstetrics, nor in King's or Miller's treatises the subject is mentioned. The latter gentleman even denies the propriety of cephalic version by internal manipulations. A somewhat different impression is obtained, by a review of the French authors, and more particularly, of those of the modern school. Of those older writers, Mauriceau, De la Motte, and Levret, we cannot expect anything but the most active surgical interference, it was a tribute which they paid to the spirit of their time. But Velpeau‡ is already acquainted with Wigand's plan, and after having it duly recorded, he goes on to say: "Before I was acquainted with the doctrine of the German professor, I had already followed this precept, and have, in conforming to it, found, that it is in fact, sometimes possible, to restore to the vertex, its natural position, etc." Jacquemier§ does briefly mention Wigand's plan, and seems to have confidence in the feasibility of its performance, while he has no personal experience on the value of this operation. A great deal more complete are the notes of Cazeaux.[*] After giving a description of the signs by which the presentation of the fœtus may be recognized, even before beginning labor, he says: "Alors pour peu que le fœtus soit mobile dans la cavité amniotique, il est très possible de ramener la tête au détroit supérieur. Il suffi pour cela, après avoir corrigé l'obliquité utérine, si elle se rencontre, de relever avec une main le côté de l'utérus auquel correspond le siége de l'enfant, et de repousser avec l'autre main la tête dans la direction du detroit superieur. Des manipulations extérieures sagement dirigées ont suffi assez souvent pour convertir la position du tronc, etc."

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* *The Principles and Practice of Obstetric Medicine and Surgery.* By F. H. Ramsbotham. With Notes and Additions by W. V. Keating, M.D. Philadelphia: Blanchard & Lea, 1859. Page 360.

† *The Principles of Midwifery.* By J. Burns, M.D., etc. 8th edit. London: Longman, Rees. 1832.

‡ *An elementary Treatise on Midwifery, or Principles of Tokology and Embryology.* By C. Velpeau. Translated by C. Meigs, etc. Philadelphia: Lindsay & Blakiston. 3d Amer. edit. 1854. Page 431.

§ *Manuel des Accouchement etc.* Par J. Jaquemier. Paris, 1846. Page 100.

The most important pamphlet, not among the French authors alone, but a pamphlet only secondary in importance to the original one, of Wigand, is the article published by Dr. A. Mattei, in the Gazette de Paris, of 1855, and, in his work, *Essai sur l'accouchement physiologique*, Paris: Victor Mason, 1855; page 179, sequ., on "*reduction cephalique and version cephalique.*" The first name he applies to the ordinary operation, generally called by most authors, cephalic version, by which the head, which is located near the pelvic entrance, as it is, for instance, in shoulder presentations, may be brought down to form a regular vertex presentation. Cephalic version means, according to Dr. Mattei's explanation, the operation by which, in breech presentations, the nates are removed from the place they formerly occupied, while the head is brought down to occupy a position above the pelvic brim, the child thus being turned entirely around its horizontal axis. "The cause," he remarks, "why cephalic reduction has been so very seldom performed by obstetricians may be found in the difficulty of detecting the presentations, before the rupture of the membranes, and this difficulty, we ourselves, had at first to overcome. The abdominal palpation, which enabled us to recognize all presentations and positions of the fœtus during pregnancy and at beginning of labor, makes the diagnosis and the reduction so easy before the rupture of the membranes, that we happened to feel the head in the iliac fossa, and that the very manipulations, for the purpose of examining, were sufficient to remove the head towards the pelvic entrance. *As long as labor has not begun, it is very easy to advance the head towards the brim of the pelvis*, by a simple pressure of the hand upon the cephalic protuberance." In this way, Dr. Mattei goes on to describe the manœuvre by which he performs cephalic reduction, and which is essentially the same as that recommended by the authors named above. His "version cephalique," is a step forwards. It is a change of a breech presentation into that of the vertex by external manipulation. The author does not recognize a breech presentation as a physiological condition, and he, therefore, proposes to change all of them into head presentations, leaving it undecided whether it ought to be done in cases of contracted pelvis. The most suitable time for the performance of this operation, is from the sixth up to the middle of the ninth month of gestation. At any rate, the nates must not yet be engaged in the pelvic entrance. For performing the operation, the woman is placed horizontally on her back, her pelvis being placed on a cushion, so as to have it elevated somewhat above the level of the abdomen. The first part of the operation consists of removing the pelvis of the child from the upper straight. For this purpose, the cubital border of one or both hands must be placed between the edge of the os pubis and the presenting part of the fœtus. This being done, the nates are gently pushed upwards, and, in a direction somewhat opposite to that of the head. While the next manœuvre is performed, the fœtal trunc must be maintained in the position thus acquired. By the third act of the operation, the head is pressed downwards, until it reaches the pelvic brim. In performing this latter manipulation, the operator has to take care to press the head downwards in the sense of the flexion of the fætal trunc. The fœtus thus turned, must be retained for some time in this new position, in order to get the extremities, and the entire body to become thus nicely encased in the uterine cavity. After the version has thus been carefully performed, the fœtus seldom retakes its former position. If this accident should happen, however, the fœtus must be turned anew, aud retained by an abdominal bandage, and if even this, should not secure the desired position, the operation must be delayed until labor has begun, in order to fix the head, by rupturing the membranes. In an appendix, Dr. Mattei reports several cases in which cephalic version had been successfully performed. One of the cases described is the following:

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[*] *Traité theorétique et pratique de l'art des accouchements, etc.* Par P. Cazeaux, Professeur à la Faculté de médicine de Paris, etc. 1st edit. Paris: F. Chamerot, 1853. Page 839.

Magdaline Calombani, a native of Taglio (Tavagne), rather small of stature, of a pretty good constitution. She does not recollect the time when she menstruated first, but says that she had always her courses regular, and lasting from eight to ten days. She is now twenty-eight years of age and has given birth to one child. In the month of November, 1853, she was unwell for the last time. During this pregnancy she has been somewhat troubled by nausea, but felt perfectly well in every other way.

On July 18th she was examined in the hospital. *Palpation.*—In the upright posture the abdomen is well rounded and elevated. the fundus being perceptible in a distance of three fingers above the umbilicus. One feels that the fœtal mass occupies the lowest section of the abdomen. but the presentation cannot be well distinguished. The woman being placed in a recumbent position. one feels a little to the right and above the umbilicus a superficial, rounded tumor: lower down and approaching the mesian line, another tumor is felt equally superficial, fixed upon a larger and deeper tumor. All these fœtal protuberances are so moveable that it is difficult to explore them. It was therefore necessary to have the fœtus laterally fixed by an assistant. During the exploration the right superior tumor was found to be the head; this we calculated therefore to be a trunk-presentation, head to the right: the tumors below and towards the left representing the feet. The woman asserts that the quickening is most often perceived below the umbilicus, and more to the right than to the left side. By the internal examination no portion of the fœtus can be detected; the neck is smooth, open. and allows the finger to enter up to the internal orifice, which is closed. Another examination, on August 16th. gives the following results: *Palpation.*—The abdomen is very much enlarged, with a great quantity of liquor amnii: the fœtal mass is principally located in the right segment of the uterus. Above and to the right of the linea alba, a round, superficial tumor is felt, which can be only the head. The rest of the fœtal tumor occupies a downward direction towards the mesian line. The upper strait offers neither a hard tumor (head), nor a soft one (pelvis).

Auscultation.—The placentar souffle very strong in the left iliac fossa and the fœtal sounds can be best perceived along a line running from right to left and from above downwards, passing through the mesian line in an oblique direction. They suddenly escape perception in continuing auscultation towards the left side and going upwards, and are utterly imperceptible on the rounded tumor, which seems to be the head.

Internal examination.—Nothing perceived in the upper strait; the os soft perfectly dilatable up to the inner orifice. Thus being perfectly aware of the position of the child, we placed the woman on her back, the lower part of which was elevated by a pillow, in order to perform the operation of turning.

Version.—After having taken our position on the right side of the woman we pushed the head of the fœtus backwards and downwards, while we elevated its trunk by the left hand, and in the same instant we perceived that the child turned; the version was performed in a few seconds. We were satisfied that this was the case, because the flanks were now empty, the fœtal tumor in a direction with the linea alba, and the head was felt distinctly through the abdominal walls, presenting in the upper strait, and also by an examination through the vagina a hard, round tumor was now easily perceptible above the pelvic entrance.

On the 17th and 18th the head is found down; the legs of the woman begin to swell. The 19th, vague pains in the abdomen are perceived.

On the 20th, after the woman had left the hospital for a short time to go on an errand in the city, she returned to her ward at the time of the physician's visit, and complained of diarrhœa and pains in her bowels; she had at the same time frequent calls to pass water and a sensation of bearing down. *Palpation.*—We found that the fœtus was displaced; the head is on the left of the linea alba and high above; one feels the pointed circumference of the left shoulder near the mesian line; the rest of the trunk not quite distinctly felt, it seems to make a curve, its concavity being turned upwards and towards the right side. In examining the upper strait the head is not felt any more.

Auscultation.—The head moves with every beating of the aorta; the maximum of the fœtal pulsation is below the place where the shoulder can be distinguished; the placental souffle is perceived in both iliac fossæ, and mostly on the right side.

Second version.—It is performed in a few seconds, just as easy as on the former occasion. Its success was verified by the palpation of the head in the upper strait. The woman was simply confined to a recumbent position without a pillow under her back. On the 24th the head is always perceptible at the upper strait by external as well as internal examination. It now could be ascertained by palpation that the trunk was turned towards the right, and the hollow part of the fœtal arch towards the left.

In the night of the 30th, labor commenced and advanced slowly. During an examination on the following day, it was ascertained that the head presented; the ictus of the fœtal heart are strongest on the right side below the umbilicus. During the following days labor advanced hardly any until September 4th, when the os began to dilate gradually and steadily. At that time the small fonticulus was found to be directed toward the right iliac bone. By introducing two fingers along the head of the child, it was tried to turn the occiput towards the os pubis. This was only partially effected, as the occiput always moved backwards as soon as the pain began to slacken. The pains were so insufficient that the head did not advance fast enough to allow labor to go on without interference. Therefore the forceps was applied, which, however, at first could not be locked. Still, when the head began to advance, the forceps was well adjusted and a living child extracted. The mother left the hospital on the 12th September, perfectly healthy.

This is one of the cases selected at random from a considerable number of similar ones, most minutely reported by Dr. Mattei. All of them are unusually interesting, fully demonstrating the possibility of an exact diagnosis of the child's presentation by external examination alone, and of cephalic version by external manipulation.

In searching the literature of the last few years, we have met with several cases published in periodicals by authors, not yet named in this article. Dr. Joseph Elliot, accoucheur at the children's institute of Stockholm, published two cases in the *Tidskrift for Läkare*, Br. VII., No. 7 of 1847.

Case 1.—On July 28th, 1837, he was called at about six o'clock, P. M., to a primipara 22 years of age, to perform the operation of turning, because the midwife attending the case, was unable to do it on account of rheumatism. On examination Dr. Elliot found the os uteri dilated to a diameter of one inch and a half, the membranes unruptured and an arm presenting, and the other presenting portions could not be distinctly made out, as the abdominal parietes were very thin. A cross position of the fœtus could be recognized by external examination, and the head could be distinguished as a round, hard mass in the left iliac region. The woman had been taken with the first labor pains on July 26th, the pelvis was somewhat contracted and the pains very insufficient, so that a prompt dilatation of the os was very unlikely to be expected, the author, therefore, resolved to try Wigand's method. He tried by gentle friction to push the head upwards, and really the head began to move. Dr. Elliot therefore continued this manipulation, trying to push the head upwards with his right hand, and to bring the feet downwards with his left. This was done at the time when the pains ceased, while during their action he tried to keep the fœtus in the position which it had acquired. This manœuver having been performed for about twenty minutes, the fœtal mass had acquired an erect position, and to the great satisfaction of the doctor, the feet instead of the arm could be felt by internal examination. The great toes were directed backwards, and the feet moved lively when they were touched ; during all this time the patient kept her recumbent position. At nine o'clock, A. M., on the following day, the os was sufficiently dilated to allow the extraction of the fœtus, which was done without delay. The child was of the female sex, and stillborn, but soon resuscitated in the usual way, the after-birth was easily removed, and the woman did well up to the fifth day of her childbed, when she was taken with typhus fever, occasioned as it seemed by mental emotion, from which she died on the ninth day.

Case 2.—On November 8th, 1837, Dr. Elliot was called to see a primipara 24 years of age. He found a cross presentation of the child in the mesogastric region, while the hypogastric region seemed to be empty, the amniotic bag presented in a large extent, but was empty, and no portion of the fœtus could be detected by internal examination. The pelvis was of natural configuration, and the pains were strong. From all these symptoms Dr. Elliot considered this to be a case of cross-presentation, and he resolved not to perform the operation of turning until he would be able to feel a portion of the fœtus. An hour later nothing was changed, and the author thought it a good plan to try the manœuvre as detailed in the foregoing case, viz., to push the fœtus upwards, leaving it to chance whether the head or the nates would come downwards, as it was impossible to make out the situation of the several parts of the fœtus. These manipulations were performed for fifteen minutes, and now the head of the fœtus could be felt presenting through the os uteri, but it was directed somewhat towards the right side, accordingly the woman was ordered to lie on her left side, and the above named manipulations continued for another hour. At ten o'clock, P. M., the child was born without the least trouble. Both mother and child did well.

Case 3.—In 1854, Dr. Spengler of Berlin. reported a case published in the *Monastsschrift für Geburtshlüfe.* (Bd. iii, p. 184.) When the woman, a primipara, was taken with the first labor pains, it was ascertained by examination through the vagina that the shoulder presented, and on further (external) examination the head was found towards the left iliac region, and the nates higher up towards the right side. The woman being placed on her left side a cushion was placed underneath that part, where the head could be recognized through the abdominal parietes. The os was dilated to the size of a quarter (Viergroschenstück), the water discharged. Gentle frictions were administered on the place which corresponded with the pelvic extremity of the fœtus, after a few hours the nates had removed nearer towards the mesian line, while the head remained in its former position, still it appeared to be more moveable than it had been before. Now both hands were stretched, and rested upon both head and nates of the fœtus, with a tendency to lower the position of the former and to elevate the latter. From time to time gentle frictions were performed upon the head and pelvis in the same direction. Although the pains were not very strong, the head began to move gradually away from the iliac bone, and approached the os uteri, so that at last the head presented in full size, while the shoulder could no more be felt through the laquear vaginæ. After a few pains the head was engaged in the pelvic entrance, and the woman was placed on her back, and at six o'clock in the evening a male child was born.

Case 4.—The following case is from Professor Grenser's report of the Dresden Lying-in Hospital (see *Monatsschrift f. Geburtsk.*, September, 1857). A strong well-built woman, æt. 32, who had borne three children happily, was brought in, in labor, on September the 7th. The abdomen appeared stretched more in the transverse direction. The os uteri was very little opened, and the right elbow of the child presented. Through the thin abdominal and uterine walls the head was distinctly felt in the left iliac fossa, the breech opposite in the right side of the uterus. The woman lying on her back, it was then attempted in the intervals of the pains to push the head downwards, and the back upwards, whilst in the acme of the pains the uterus was merely compressed on either side. These manipulations were continued for half an hour, then the patient was made to lie on the left side, and in the place where the head was felt a hard pillow was pressed. On examination the elbow was no longer felt, neither could any other part. In the mean time the os uteri had expanded somewhat. The patient was kept in the same position, and at six P. M. the head was felt by ballotement in the brim. At noon next day the os had fully opened, the liquor amnii escaped, and in one hour and three quarters a living child weighing eight pounds, was born in the first cranial position. The mother did well.

Case 5.—The operation of turning by external manipulation, of the latest date, and published for the first time on this occasion, is that of our distinguished friend Dr. Shnetter of this city, who kindly informed us of the history of the case. The operation was performed on September 22d, 1859. On that day the doctor was called to see Mrs. Johanna H———, 26 years of age, residing at 502 Houston street. She is a healthy multipara, of medium size. Four years ago she fell in labor with her first child, which presented in a cross situation. The physician who attended her on that occasion turned the child by the feet, and extracted it up to the head, which he was unable to deliver. Therefore Dr. Shnetter was called in and delivered the woman of a dead child. When Mrs. H. went through her second confinement, the vertex presented and all went on as favorably as could be desired. On the above named day Dr. Shnetter saw Mrs. H. for the first time at about eight o'clock, A. M. On external examination the head in the shape of a round, hard mass could be felt distinctly through the abdominal walls, in the left iliac fossa, and the woman declared that the quickening was most distinctly felt towards the right side, somewhat above the umbilicus. By internal examination it was found that the os was dilated to about an inch in diameter, and that the amniotic bag presented in the form of a flaccid oblong sac, while no fœtal part could be detected. Upon this four fingers were introduced into the vagina, and now it was easy to detect the left shoulder downmost, back forwards. The pains appeared to be pretty strong. The woman was now placed on her left side, and the doctor tried by pressing upon the head to move it downwards, towards the pelvic entrance, while with the other hand he pushed the trunk towards the mesian line. Readily the head moved away, and at the same time the woman told the doctor that she had the sensation as if the child had turned inside of her. Upon internal examination performed immediately afterwards, it was found that the amniotic bag had somewhat changed its disposition, it having moved upwards while its form was of more spherical shape, with considerably larger lateral diameters. At the same time the head could be felt distinctly in the upper strait. The doctor now left Mrs. H. and advised her to keep the position on the left side. Half an hour later when Dr. Shnetter saw her again, the head had returned to its former position. He therefore performed the same manœuvre as detailed above, but in order to make sure of the head now, the membranes were ruptured. After this was done a portion of the funis escaped from the womb; this was brought back, and the woman placed *à la vache*, as proposed by Doctor Thomas. The woman kept this position for about a quarter of an hour, and although she had several good pains, during this time the funis never protruded any more. She therefore was placed on her left side again, and a pillow placed underneath the left iliac fossa. At twelve o'clock the os was pretty well dilated, but although the pains seemed to be sufficiently strong, the head did not advance, it being pressed against the upper edge of the symphysis pubis, in consequence of the pelvis having an unusually strong inclination. Therefore the forceps was applied and a full grown child was delivered in the most desirable state of life.

Case 6.—Lastly, I will mention that I have performed this operation myself in 1854, in a woman who had been delivered twice before of full grown dead children, by version and extraction by the feet. The other features in the case were so much like those detailed in the case last mentioned, with the exception of the prolapse of the funis, that it would be only a repetition, were I to give a history in detail, from which I refrain; the more so, because I had to write it down from memory only. Suffice it to say, that it was a shoulder presentation, and the child turned by external manipulation. It was born alive in a vertex presentation.

After this sketch of the operation from the oldest times to the present day, we will now pass over to a description of the operation itself, which may be done in a few words, as the most important points are already alluded to in the historical part.

Advantages of the operation.—Indications.—Contra-Indications.—The great advantage and intrinsic value of the proceeding we are speaking of, is the safety for mother and child. It is void of that fear, and of that suffering which is connected with most of the other operations. The nearest point of comparison is turning, be it podalic or cephalic, by internal manipulations. In every instance where the hand of the operator is brought in contact with the inner surface of the womb, there is always a certain amount of suffering varying according to the particular features, proper to every individual case, according to to the sensibility of the womb, according to the skill and state of refinement of the accoucheur. It might be objected that under careful and experienced management, chloroform does away with all that might have been formerly urged to the disadvantage of any operation. I, myself, am in the habit of using chloroform extensively, and more particularly, in operative midwifery cases. But who is the man who would hesitate in the choice between two modes of operating, of which the one is innocuous, on account of the chloroform, and the other equally harmless without chloroform? The operation has for its principal object to avoid turning by the feet, thus bringing the child in the safest presentation imaginable. I think all of my readers are enlightened enough to understand, without any further explanation, the full weight of this advantage. Before speaking of the indications, let me say a few words with regard to the manner in which these manipulations do influence the position of the fœtus in utero. While the first advocates of this proceeding imagined that the direct motion imparted to the fœtal parts by outside pressure, was the only way in which their position was influenced, it was left to the ingenuousness of Drs. Joerg, Busch and Kilian to call our attention to the *dynamic* effect of these manipulations upon the uterus. There is no doubt a great deal of truth in this belief, if we bear in mind, that the largest number of transverse or oblique presentations is not only accompanied, but even caused by deformities of the usually ovoid shape of the womb, and if they should be corrected, the situation of the fœtus would also come nearer to a more natural condition; then we can easily imagine why pressure exerted upon the womb from outside will be apt to correct malpositions of the fœtus. But it is our conviction that neither the dynamical nor the mechanical effect do either of them alone effect the change; it is a combination of both that does the work.

The operation is indicated in all those cases where the child presents in an oblique or transverse position, in such a way that the head is situated not far from the pelvic entrance, provided that there is nothing in the case which actually demands or may possibly after a while demand an actual interference for hastening the process of labor. For example, in all cases of neck and shoulder presentations, in all presentations of the trunk where the head is situated nearer to the pelvis than to the chest, we may try to correct the position of the child by external manipulations. In proposing this general indication, we follow the advice of all reliable authors. If we have not comprised in it Dr. Mattei's proposition, to perform the operation in cases of breach presentation, this was not done from a want of trust in his assertions, or in the reliability of the cases published by this ingenuous accoucheur, but rather because we think that breech presentations under ordinary circumstances, and skillfully managed, are just as safe for the life of the child as those of the head. But Mattei's proposition is of undeniable value in cases of pelves contracted to such a degree as to demand craniotomy; even if the head comes last—of pelves which would not admit of the execution of Simpson's well-known proposition. The caution not to try version by external manipulation, in cases where we want a prompt delivery of the child by all means, is derived from the fact that such trials do sometimes prove unsuccessful, so at least, unless continued for a long while. It would be wrong, for instance, to try these manipulations in a case of hemorrhage or convulsions, because of the loss of valuable time, which ought to have been applied in the performance of a prompter mode of delivery, and even should we succeed in a similar instance to bring the head down to the upper strait, this would afterwards prove a bar to the easy performance of delivery by the feet, if required by insufficiency of pains, which failed to firmly engage the head in the pelvic brim, as a preparatory step for delivery with the forceps.

The performance of the Operation.—The correct diagnosis of the situation of the fœtus in utero by external examination, is the preparatory step and an intrinsic part of the operation. Before attempting to perform it, the operator must have in every single case a distinct idea of the presentation of the child in his mind, to the confirmation of which repeated inspection, palpation, and auscultation must be called to aid; internal examination will, in the great majority of cases, yield only negative results. This done, the woman is ordered to lie on her back, while the physician takes his position on the side of the bed opposite that where the head is located. Suppose the head is felt in the *left* iliac fossa, the operator places his *right hand* upon the cranial protuberance, while his left hand is placed on that portion of the uterus where the nates are situated. Now, gentle frictions are made upon the points indicated, and at once a pressure effected upon the head with a tendency to push it downwards and towards the mesian line, while the breech is gently pushed upwards and towards the opposite side. All this is done during an interval of the pains. As soon as another pain begins, both hands keep their place, and the woman is ordered to turn on her left side. With the remission of the pain the same manœuvre must be repeated, and continued until a change of presentation is effected. This having been ascertained by internal examination, the woman has to continue the posture on her left side, and a small hard pillow is to be placed just underneath that portion of the abdomen where the fœtal head was at first situated. If after a number of pains the head is found to have retaken its former situation, the manipulations must be repeated, and after turning has been effected again it is advisable to rupture the membranes, in order to keep the head from returning to where it was formerly imbedded. The rest of labor is conducted like an ordinary vertex presentation.

In some cases it is necessary to repeat these manipulations three or four times before the head becomes firmly engaged in the upper strait. But should the operator not have succeeded before the waters are discharged, it is not safe nor of any use to persevere in the operations. After the rupture of the amniotic bag the child must be turned by the feet, or on the head, by internal manipulations. Sometimes it is possible to effect a rectification of the presentation, by a proper posture of the mother on that side where the head of the child is situated, while a pillow is placed underneath the latter. This may be attempted even before labor has begun, as some authors, and especially Dr. Mattei, recommend it. The most suitable time for the performance of the operation as detailed above, is from the beginning of labor to perfect dilatation of the os. The operation has been attempted in the last weeks of pregnancy; but as the pains themselves are a very important aid for the successful performance of the operation, it is not advisable to undertake it at an earlier season. There is no doubt that the position of the fœtus can be changed at any time during the last months of gestation ; but it is the general opinion of authors, that a lasting rectification can only be attained when the operation is performed at the time of the beginning of labor.

The only physical obstacle against a successful operation is an unusual thickness or tension of the abdominal walls, which prevents a clear diagnosis of the presentation. Finally, the womb itself might be by some cause or other too tender to allow of a continued pressing with the hands, or it might be so firmly contracted around the fœtus, owing to a scarcity of liquor amnii, that all our attempts would fail to succeed. But these are coincidences not very often met with, and it is therefore the more to be wondered at that this harmless operation is not generally attempted by obstetricians. The reasons for this unjustifiable neglect among practitioners on this continent, may be found in the want of recommendation of this operation by English and American authors, in the want of confidence attached to external examination, and perhaps in a very pardonable desire to choose rather an operation (turning by the feet) which never fails to have a striking effect, than one which may perhaps result in an unsuccessful attempt. But if we consider, that by this attempt nothing is lost for future action in another way; if we consider the trifling reaction which it leaves on the system of the mother; if we consider the advantages of a vertex presentation for the life of the child, we feel it our duty to call upon the profession to remember that there is such a thing as turning by external manipulation, and that those who have practised it most often were men the names of whom we only pronounce with a feeling of deepest admiration.

Art. IV.—*Anti-Lactescent properties of compressed sponge.* By P. Stewart, M.D., of Peekskill, N. Y.

Mrs. K., from the city of New York, engaged me about three weeks before her expected accouchement with her fifth child, to attend her through that critical period, and, at the same time, with great earnestness, desired to know if something could not be done to prevent her having a broken breast. She stated, that in every previous confinement, she had endured protracted and intense suffering with her left breast, which always suppurated, and since her first child, she had never been able to procure any milk from it at all. She declared that the dread of the parturient process was nothing compared with that of a broken breast. With this history of her four previous confinements, and because of her earnest entreaties, I determined, if possible, to prevent the milk from entering the gland from the first. With this view, I directed a piece of circular sponge, of the diameter of the breast, an inch or more in thickness, freed from all foreign substances, and subjected to a pressure of from fifteen to twenty lbs. for four or five days.

The day after her confinement, before the milk secretion began, I applied this sponge to the gland, making a hole in its centre with my finger, to receive the nipple, and by an appropriate bandage, made nearly equal pressure over the entire breast.

The result was, when the secretion of milk occurred in the other breast, none, whatever, occurred in the one subjected to the pressure, except at the periphery of the gland that the sponge did not cover, when it seemed to dam up, and formed a ridge nearly as large as the finger, around its entire circumference, which, however, disappeared in two or three days, by the application of oleum camphorata, not the slightest pain or uneasiness was felt in the breast, and the delight of the patient at the complete success of the prophylactic was almost beyond bounds. It is probable, the same pressure from any other subtance, would have had about the same effect as the sponge, but I know of no article that would meet the indications with so much ease of application, comfort to the patient, and such complete satisfaction in all directions.

Dr. Batchelder highly lauds the compressed sponge, as an application to various tumors of the breast, mammary abscess, etc., but so far as my memory serves me, and my knowledge extends, neither he nor any other writer has mentioned it for the purpose of preventing the secretion of milk. That this case was not a delusion, seems evident from the following facts: 1st. The breast before confinement was large and full, precisely like the other one, except that its surface was marked by two or three cicatrices, the effects of abscesses in former confinements. 2nd. The milk was freely secreted in the periphery of the gland, beyond the border of the sponge, as has been already stated. 3rd. The breast in her other confinements, secreted quite as abundantly as the other, and simultaneously with it.

These reasons seem to render it morally sure that milk would have filled the gland, if the pressure had not been applied. The sponge was continued about two weeks, and up to the present time, some four months, no milk has appeared in her breast.

Peekskill, September 29, 1859.

ORIGINAL LECTURES.

LECTURES ON VENEREAL.

Delivered at the College of Physicians and Surgeons of the University of the State of New York.

By FREEMAN J. BUMSTEAD, M.D.,
SURGEON TO ST. LUKE'S HOSPITAL.

Lecture VI.

Gleet:—Its Causes, Pathology, Symptoms and Treatment—Constitutional Remedies—Bougies.

Gentlemen:—A slight and chronic discharge from the urethra destitute of symptoms of acute inflammation, is called in medical language Blennorrhœa, in common parlance, a Gleet.

A gleet is generally the sequence of an attack of gonorrhœa which has been neglected, or treated imperfectly or without success. When following an acute attack of urethritis, without intermission, it is impossible to clearly define the line of demarcation between the two; to say where the gonorrhœa ceases and the gleet begins. In other cases, however, a preceding attack of gonorrhœa has been apparently cured; the patient has for some weeks or even months ceased attendance upon the surgeon, when he again returns, saying that for several mornings he has observed a small amount of discharge at the meatus urinarius. This is especially liable to occur with men of dissipated habits, who have had frequent attacks of gonorrhœa, and whose systems have been debilitated by an irregular course of life. In such instances it is probable that the complete cure of the preceding clap was only apparent; that some inflammation was left behind, lurking in the deeper portions of the canal, the symptoms of which were so slight as not to attract attention, until aggravated by debauch or other exciting cause. If the urethra be examined in these cases, by means of a full-sized bougie, in many of them there will be found to exist a greater or less contraction of the canal; for the presence of a stricture is one of the most fruitful sources of the persistence of a gleety discharge, and you will meet with patients, who for five, ten or twenty years, following an attack of gonorrhœa, have from time to time suffered from gleet, which has appeared and disappeared, *pari passu* with the aggravation or improvement of a stricture of the urethra. Other organic changes besides strictures are sometimes found to exist in the urethra and to be the cause of a gleety discharge. In several instances, in patients who also had warts on the glans penis, I have been able to discover vegetations within the canal, by separating the lips of the meatus. Such vegetations are chiefly confined to the fossa navicularis, although they may be more deeply situated. Polypoid growths in the urethra are also met with, but are extremely rare. They are peculiar to the prostatic portion of the canal, and according to Mr. Thompson, are usually accompanied by similar growths at the neck of the bladder or within this organ. (See Thompson on Strictures, p. 73 et seq.)

Idiopathic gleet, that is, gleet independent of any preceding acute urethritis, is also admitted. Such not unfrequently occurs in connection with disease of the prostate gland, and especially with the hypertrophy of this organ, so common in old men. Idiopathic gleet is also said to arise from disorders of the digestive function and from disease of the kidney or bladder, in consequence of which the urine is rendered abnormally irritant; but although these causes occasionally excite a temporary discharge from the urethra, I have never met with a case in which they could be said to be productive of a true gleet.

It is evident from what has now been said, that gleet may be induced or kept up by local causes, but the etiology of gleet would be far from complete, if we should omit to mention constitutional influences. The chief of these are general debility, induced by whatever cause, and a strumous, rheumatic or gouty diathesis. That general debility is a most fruitful cause of the persistence of a gleet, is evident when we see how frequent this disease is in persons whose constitutions have been impaired by excesses, and especially when we observe the beneficial influence of tonics and general hygienic measures in eradicating it. Again, persons of a strumous diathesis, who are prone to chronic inflammations of other mucous membranes, are particularly subject to gleet, as the sequence of an attack of gonorrhœa, and their disease is found to be benefited by remedies addressed to the constitutional taint. The influence of rheumatism and gout in producing urethral discharges has already been mentioned in connection with gonorrhœa. In the treatment of gleet it is of the highest importance to bear in mind these constitutional causes of the disease.

In many cases of this disease, the discharge is the only symptom. There is an entire absence of pain in the part, of redness and tumefaction of the lips of the meatus, and of scalding in passing water. In some instances, however, the patient experiences a feeling of uneasiness in the penis or perineum, or an itching about the glans or in the deeper portions of the canal, and this may be constant or only attendant upon the passage of the urine. Again, if the lips of the meatus be glued together in the morning, and be not separated before passing water, the distention of the canal by the urine before it has overcome the obstruction, excites a sharp pain in the part, which is at once relieved when the stream finds free exit. This pain may be avoided by separating the lips of the urethra before micturition.

The discharge in gleet varies in its character, in its quantity, and in the times of its appearance. In some instances it evidently consists of a mixture of pus and mucus, and this is most frequently the case, when the gleet is the result of a recent attack of gonorrhœa. In other instances, it is perfectly transparent to the unassisted eye, and, under the microscope, is found to consist of a clear fluid, containing epithelial cells and free nuclei, with only a few rare pus globules, or it may be entirely destitute of the latter. Again, it may be composed of masses, like the coagulated white of an egg, which are with difficulty forced from the urethra during straining at stool or in making water. When dependent upon a stricture, the discharge is sometimes thick and purulent, and sometimes mucous, either alone or containing shreds of dense material. It may be constant in its appearance and sufficiently copious to stain the linen, or it may be perceptible only in the morning on rising, when the lips of the meatus are found to be glued together, and a drop of pus or mucus may be made to appear on pressure; or it may be forced from the canal during defecation or be mingled with the last drops of urine in micturition. The small amount of the discharge in most cases of gleet, and the frequency of the disease among soldiers, has given rise to the French popular name of *goutte militaire.*

The mild symptoms of gleet now described are liable to be aggravated by any cause which produces urethral or vesical irritation. In other words, a gleet is readily transformed into a clap. Excess in eating, alcoholic stimulants, free sexual indulgence, violent exercise, a long ride, or exposure to sudden changes of temperature, may bring on a copious purulent discharge, attended by tumefaction of the parts, scalding in micturition, and all the symptoms of acute gonorrhæa. A few hours alone are required for this change to take place, and it is doubtless in this manner that we are to explain the sudden reappearance of some attacks of gonorrhœa—often supposed to be due to a fresh contagion—when patients, too confident that they are well, are hasty in indulging in drink or coitus.

Hunter, in his work on Venereal, states that "a gleet is perfectly "innocent with respect to infection," and that in the relapses which so frequently occur, "the virus," in his opinion, "does not "return" This statement, although often refuted, still finds place in many elementary works, which are in the hands of medical students. A doctrine, more dangerous to the peace of families, could scarcely be promulgated. It is indeed true that men are occasionally met with who have for years suffered from gleet, and who have yet had frequent connection with their wives with impunity, but where contagion ceases and immunity begins, no one can tell;

and even if we were able to pronounce a discharge of a certain degree of purity innocuous, we could not foresee the effect upon it of a few hours' sexual indulgence. It may at the present moment be wholly mucous and entirely innocent of contagious properties, and yet a few hours hence be purulent and in the highest degree dangerous. The fact is, no one can pronounce sexual congress safe, so long as a urethral discharge exists, and in replying to the questions on this point, so frequently put by patients, the surgeon should not only avoid incurring the responsibility of allowing it, but do all in his power to dissuade from it.

Our knowledge of the pathology of gleet is extremely imperfect, since opportunities for post-mortem examinations are very rare, and the deeper portions of the urethra are beyond the reach of direct observation, even with the aid of the uretroscope. The seat of the disease doubtless varies in different cases, and perhaps influences in some measure the character of the discharge. For instance, Mr. Milton is inclined to regard the masses like white of egg, which are sometimes expelled in this disease, as coming from the prostate or neck of the bladder. I believe that in most cases gleet is seated in the deeper portions of the urethra, and when the discharge is sufficiently copious to be made to appear on pressure, we may often satisfy ourselves of this fact by commencing with the anterior portion of the penis, and pressing from behind forwards, first for the distance of an inch, then for two inches, and so on, until the fluid be made to appear, when it will be found that it has been elicited from the bulbous or membranous region. The small quantity of the discharge in some cases of gleet would seem to indicate that the diseased surface is but of small extent.

Mr. Dick (*Gleet: its Pathology and Treatment*, p. 5) distinctly states that there is generally only one spot affected by chronic inflammation, and very rarely several; and that these spots are chiefly to be found either behind the fossa navicularis or just at the beginning of the bulbous portion, but he fails to tell us by what means he has arrived at such accurate diagnosis, and his observation cannot therefore be received with full confidence. The pathological changes in the affected part are probably similar to those which occur in chronic inflammation of other mucous membranes, as the conjunctivas tear passages and the external meatus auditorius, and the extension of the inflammation to the lining membrane of the follicles and to the ducts which open into the deeper portions of the urethra, may account for the persistence of the disease and the difficulty of its cure.

The obstinacy of many cases of gleet has become almost proverbial, and is the subject of a standing joke within the walls of the *Hôpital du Midi*, in Paris, where the student annually hears the statement, that "if the world should be again reduced to chaos, a *goutte militaire* would still remain unchanged." Although this disease is so mild in its symptoms, and really gives the patient but little discomfiture, yet the effect upon his mind is very sad. He is constantly dwelling upon his infirmity, and unless he find relief, soon becomes a hypochondriac, one of that class of syphilophobists, who are met with in the office of every physician. His sufferings, although chiefly mental, are none the less real, and demand that our utmost efforts should be put forth for their relief. With patience and perseverance, I believe that the attempt will rarely fail to be crowned with success.

In the treatment of gleet our remedies should be addressed both to the general system and the local disease. It may be laid down as a rule, to which there are but few exceptions, that in this disease, the tone of the general health is below par. I do not mean by this remark that you will find every patient with gleet, weak and emaciated; many will appear to be in excellent health; but, on inquiry, you will often learn that even these men are not capable of the same amount of exertion that they were formerly accustomed to; they are sensible that they have lost some of their animal vigor, and the good effect of general hygienic measures and tonics in their treatment will be unmistakable. A plain but substantial diet of fresh meats, vegetables, etc., fresh air and attention to the cleanliness of the skin, by means of frequent sponging or bathing, are required. With regard to exercise: although a long walk or ride especially when carried to fatigue, will be found to aggravate the discharge, yet when commenced with moderation, and gradually and steadily increased in proportion to the strength, they are found to be highly beneficial; and to this rule, even horseback exercise is not an exception. Healthy exercise of the mind is no less important than that of the body, and the attention of the patient should be distracted as much as possible from his disease, and all books and associations calculated to excite the passions be avoided. The bowels should be kept open daily. This should be accomplished, if possible by selecting such articles of food as are laxative, and by regularity in the hour of going to the closet, or by the administration of medicine if required. One of the following pills taken at bedtime, will usually insure a free stool in the morning.

℞. Strychniæ, gr. ss.
Pil. colocynth. comp. ʒss.
M.

Divide into thirty pills.

In the tincture of the chloride of iron, we have a most valuable combination of a tonic and an astringent; which, in most cases of disease of the generative organs in the male and female, is unequaled by any of the more modern and elegant preparations of this mineral. It may be given in doses of from five to twenty drops, largely diluted with water, three times a day, directly after meals. If the dose be properly graduated, it less frequently excites headache in the male than the female; should this unpleasant symptom occur, iron reduced by hydrogen may be substituted for it, in doses of three grains, three times a day. Where the constitutional debility is marked, the union of quinine with iron may be desirable, as in the following:

℞. Ferri et quiniæ citratis, ʒj.–ij.
Aquæ, ℥j.
Syrupi limonis, ℥ij.
M.

A teaspoonful after each meal.

℞. Tincturæ cantharidis, ʒi.
Quiniæ sulphatis, ʒss.
Tincturæ ferri chloridi, ʒij.
Acidi sulphurici diluti, xxx.
Aquæ destillatæ, ℥viij.
M.

One ounce three times a day.—(Childs.)

Other salts of iron, as the tartrate of iron and potassa, or the pyro-phosphate of iron, may be substituted for the citrate, in the first of the above prescriptions.

In the administration of iron I have always found a rule laid down by Trousseau a good one, viz., not to stop the medicine suddenly; after the object for which it is administered has been attained, it may be omitted for a fortnight, when it should again be resumed for a few weeks; in this way its effect is rendered much more permanent.

With patients of a strumous diathesis, cod-liver oil, the syrup of the phosphates, or Blancard's pills of iodide of iron, may often be used with advantage. I have found that the iodide of potassium has a tendency to increase the discharge from the urethra, as it often does discharges from other mucous membranes, and I do not therefore administer it. This effect of the iodide may frequently be observed, when we are giving it for tertiary syphilis to patients, who, at the same time, are affected with gleet.

From what has already been said of copaiba and cubebs, it is evident that but little good can be expected from their administration in cases of chronic urethral discharge. Moreover, most patients, whose disease has arrived at this stage, have already taken them *ad nauseam*, for their preceding gonorrhœa; hence, we are rarely called upon to administer them in pure gleet. In those cases, however, in which the gleet has relapsed into a clap, they may be given with benefit, especially when combined with a tonic, as in the *dragées* of copaiba, cubebs and citrate of iron; in Me t's pills, the formula for which has already been given; and as in the following prescription:

R. Copaibæ, ℥ss.
Tincturæ cantharidis, ℥ss.
Tincturæ ferri chloridi, ℥j.
M.

Dose—*Thirty drops three times a day.*

You will observe that the tincture of cantharides is an ingredient of several of the prescriptions which I have given you. Experience has shown us that this drug exerts a decided curative action in many cases of gleet, and in gonorrhœa also, in the chronic stage. It is a favorite remedy with the homœpaths, in doses of a drop of the tincture every few hours, in the acute stage of clap, and is considered to be indicated by scalding in micturition, chordee, and a greenish or bloody discharge. I have used it however only in the chronic stage. The tincture may be given in doses of three or five drops three times a day, or it may be combined with iron, as follows:

R. Tincturæ cantharidis, ʒij.
Tincturæ ferri chloridi, ʒvj.
M.

Ten drops in water, three times a day.

In some cases of gleet there is considerable irritability of the neck of the bladder present, as shown by a frequent desire to pass the urine and unpleasant sensations in the perineum. In these cases benefit will be derived from the administration of the salts of potash, combined with hyoscyamus, as in the prescriptions already given when speaking of the acute stage of gonorrhœa. Canada balsam is also excellent under these circumstances.

R Abietis balsameæ, ʒij.
Div. in pil., no. xxiv.

Two, three times a day.

The treatment of no case of gleet should be undertaken without a careful preliminary examination of the urethra, by means of a full-sized bougie, to ascertain if a stricture be present. If the slightest contraction of the canal be found, it should be dilated by the passage of bougies, repeated every second, third, or fourth day, according to the tolerance exhibited by the urethra. The size of the bougie should be adapted to the calibre of the contracted portion, and we should avoid exciting inflammation by undue force, or a prolonged sojourn of the instrument in the canal. In several instances I have seen swelled testicle excited by the forcible introduction of a large bougie for the relief of a stricture. But, for full directions for the treatment of strictures, I must refer you to special treatises on this subject, and particularly to the work of Mr. Henry Thompson, published in London, since the limits of these lectures do not permit the full consideration of this subject.

Having now spoken of the condition of the general system, and the complications which may exist, we have, as it were, cleared the track and smoothed the way for the consideration of remedies especially addressed to the local disease.

Out of the multitude of means proposed for the local treatment of gleet, there are only three which can be said to have stood the test of experience, and these three, either alone or combined, will rarely fail of success, if properly persevered with. I refer to bougies, injections, and blisters.

The frequent passage of bougies is a very efficacious method of treating gleet, even where no stricture is present requiring dilatation. Do not ask me how how the bougies effect a cure, for I confess that I do not know. They are said to "set up a new action in the part," but of the exact meaning of this expression I am ignorant. Perhaps by their distention of the canal, they expose lacunæ, in which minute quantities of matter would otherwise lodge, and keep up the disease; perhaps they act as counter-irritants. Whatever their mode of action, however, of their efficacy their is no question. They are highly recommended by the most eminent writers on venereal, and, in my own hands, I have found them unsurpassed by any other method of treatment.

I am very partial to olive-pointed bougies, or bougies gradually tapering toward their extremity and terminating in an enlargement shaped like an olive. They are introduced with great ease and little inconvenience to the patient, and the contraction back of the olive point facilitates the introduction of medicated ointments into the deeper portions of the canal. The bougie should be of such a size as to fully distend the canal but not to stretch it, and it should be smeared with simple cerate, lard, olive or castor oil, or glycerin. The bladder should first be emptied, and I prefer that the patient should assume the recumbent posture. The first passage of a bougie is often very disagreeable to the patient, although it may be introduced with the greatest gentleness and excite no pain whatever. This feeling is often carried so far as to produce syncope, hence it is better to prolong the first session for a few minutes only. After a few insertions, it ceases to give any annoyance, and the instrument may be retained for from half an hour to an hour.

It sometimes happens that the use of the bougie aggravates the discharge, appearing to wake up the old clap which has for a while slumbered. In such cases when the discharge becomes copious and purulent, it is best to omit the bougie and resort to injections, under which the disease will often be found to disappear entirely and permanently. This aggravation of the symptoms, however, according to my experience, takes place in the minority of cases only.

With this exception, the passage of the bougie may be repeated every second or third day at first, and afterwards every day, or in some instances as often as twice a day. The length of time requisite for a cure by means of bougies, varies in different cases. As examples of their successful employment I may mention one case recently under my care, a gleet of four years' standing, which was treated with the tincture of the chloride of iron internally, and the introduction of bougies every second day, and in which a cure was effected in two weeks. In another case, a gleet of nine months, the discharge disappeared in three weeks under the use of the same means. Other similiar cases might be mentioned, but such satisfactory results cannot by any means be expected in every case. In many, this treatment must be continued for several months, or other measures, as injections and blisters, be resorted to.

Bougies may be medicated in various ways. Calomel rubbed up with sufficient glycerin or oil to cover it, forms a very cleanly and excellent mixture with which to anoint the bougie, and I think materially assists the curative action. Mercurial ointment may also be used, either alone or combined with extract of belladonna, the latter being added in case the urethra is irritable.

℞. Unguenti hydrargyri, ℥ss.
Extracti belladonnæ, ʒss.
M.

When it is desired to stimulate the mucous membrane, we may employ the diluted ointment of red oxide of mercury, or an ointment containing a few grains of nitrate of silver, but these stimulants should not be continued for any length of time, lest they keep up the discharge.

℞. Ung. hydrarg. oxidi rubri, ʒj.
Adipis, ʒiij.
M.

℞. Argenti nitratis, gr. v–x.
Adipis, ℥j.
M.

Lecture VII.

Treatment of Gleet concluded: Injections—Blisters.

For much that has reference to the use of injections—the materials composing them and the manner of their employment—I must refer you to what I have already said in connection with the treatment of the third stage of gonorrhœa.

In gleet as in gonorrhœa, I prefer the sulphate of zinc or nitrate of silver to other salts, and a weak in preference to a strong solution. Success depends in a great measure upon the thoroughness and frequency of the application. From two to three grains of the sulphate of zinc to the ounce of water may be taken as the standard of medium strength, and the solution should be employed as frequently as the patient is able to pass his water, or every two or three hours. I believe this frequent use of the injection to be of the first importance. The same injection which fails when used two or three times a day, will often succeed when employed every few hours.

A solution of nitrate of silver cannot be employed so often as this. When very weak, as a sixth of a grain to the ounce, it may be used twice a day; but I generally employ it of the strength of from two to five grains to the ounce, injecting it with my own hands once or twice a week, and allowing the patient to use a solution of the sulphate of zinc in the meanwhile. Whenever irritant injections, as those containing nitrate of silver, are used, the surgeon should constantly be aware that it is possible to keep up the disease by the very means designed for its cure.

This, the ordinary method of using injections, answers every purpose, when the disease is confined to the anterior portion of the urethra; but when, as is true in most old cases of gleet, it is seated in the deeper portion of the canal, this method fails, simply for the reason that the injected fluid does not reach the affected tissue. That we cannot, by means of a syringe introduced within the meatus, freely inject the whole length of the urethra, is evident from the fact, that after a certain quantity—about half an ounce—is thrown in, the remains of the contents of the syringe is forced out, either at the side of the point of the instrument, or finds its way above the piston.. The point of obstruction met with by the injected fluid is situated at the commencement of the membranous portion of the urethra; and the obstruction is due to the contraction of muscular fibres, which serve as a sphincter to guard the urinary passage against the entrance of foreign bodies. What part in this contraction is played by the muscular fibres proper to the urethra, what by Wilson's muscle, and what by the bulbo-cavernosus, it is unimportant to our present purpose to inquire. This sphincter is analagous to the similar muscles situated near the outlet of other mucous passages of the body. All persons who are familiar with catheterization, are aware of the temporary obstruction which it presents to the passage of a catheter or sound.

It is not asserted that this sphincter is entirely impassable to injections from without. If the spongy portion of the urethra be filled with pure water, the fluid retained by compression of the meatus, and pressure be made from before, backwards along the course of the canal, the sphincter in a few seconds relaxes in a measure, and allows a portion of the injection to penetrate beyond it, and at the same time the patient feels a desire to pass his water; but it is only a small portion of the fluid which thus advances towards the bladder, and not a sufficient quantity enters to fully distend the canal, or to make a thorough application to its walls. Again, when, instead of pure water, an irritant fluid is used, the muscular action is heightened, and the difficulty of penetrating to the deeper portion of the urethra increased.

In order to effect the direct application of an astringent fluid to the diseased surface in gleet, when this disease is seated in the membranous or prostatic portion of the urethra, surgeons have practised and recommended injections through a catheter, the point of which should be introduced beyond the bulbous portion of the urethra, or even into the bladder; in the latter case, the the fluid being thrown into the bladder, the patient has been made to evacuate this organ immediately, and thus insure the application of the fluid to the walls of the urethra. Mr. Langston Parker in his work on syphilitic diseases, says: "In affections of the deeper-seated portions of the urethra, I pass a catheter into the bladder itself, and throw the injection through it to the extent of four or six ounces; then withdraw the catheter, let the injection remain a few minutes, and desire the patient to force it out. The bladder should be emptied before the injection is used. In this manner weak solutions of creasote, bichloride of mercury, nitrate of silver, the tincture of the sesquichloride of iron, and other remedies, may be used with perfect safety and a very great amount of success." I have never been able to convince myself of the "perfect safety," nor can I see the necessity, of injecting the bladder for disease of the urethra in the manner recommended by Mr. Parker; consequently I have never done it; but I am in the habit of injecting the deeper portion of the canal, by means of a catheter, with its point introduced into the membranous or prostatic portion of the urethra, and with very satisfactory results in long-standing cases of gleet. I formerly used an ordinary gum-elastic catheter and a urethral syringe for this purpose, but lately have employed the "urethral syringe with extra long pipe," manufactured by the American Hard Rubber Company, as more convenient.

Recently, M. Diday, of Lyon (*Annuaire de la Syphilis, année* 1858), has given very methodical and minute directions, as to the manner of employing these injections, which are in substance as follows: The length of the urethra from the meatus to the neck of the bladder is first to be measured. For this purpose, introduce a catheter or gum-elastic bougie, with two lateral openings at the end, into the bladder, when the urine will begin to flow through the instrument. Now gradually withdraw the catheter until the urine ceases to appear, and at once mark the point in contact with the meatus, by tying a string round it. On withdrawing the catheter, the distance from the string to the extremity will give you the distance from the meatus to the neck of the bladder. This procedure has allowed a portion of the urine to enter the urethra, and the active principle of the injection would be decomposed by it to a certain degree, if we should inject at once; it is therefore better to wait half an hour until the urethra is a gain comparatively free. After this lapse of time let the catheter be again introduced, taking care, with the string tied round the stem as a guide, that its point penetrates to the vicinity of the neck of the bladder, but does not enter this organ. Now let the patient hold the catheter in place while the surgeon inserts the point of a syringe in its outer extremity and throws in a few drachms of the fluid to be injected. After waiting half a minute or so, the catheter is to be withdrawn for a third of an inch, and and as much more of the fluid thrown in, and this process is to be repeated until the point of the instrument is withdrawn as far as the bulbous portion.

So long as the extremity of the catheter is in the prostatic or membranous region—that is, beyond the sphincter muscle already referred to—none of the injected liquid escapes from the meatus ; but so soon as it is withdrawn sufficiently to occupy the bulbous portion of the canal, the fluid finds exit by the side of the stem of the instrument. What becomes of the injection in the former instance? It must evidently have entered the bladder, for it all disappears, no matter how large a quantity be thrown in. And here you may inquire, why it is not equally objectionable to have the fluid enter the bladder in this way, as to have it injected directly into this viscus, as is done by Mr. Parker. I reply that in the latter case, we must employ a strong injection in order to allow for the partial decomposition of the contained salt by the urine, while in the former the injection may be weak, and whatever portion of it enters the bladder is entirely decomposed and rendered inert. The advantages of this mode of injecting are obvious. The urethra is distended and freed from folds by the catheter, which should be of full size, and the fluid is applied directly to the mouths of the lacunæ and ducts, in which the disease probably lurks. Again, by observing the distance of the string tied round the catheter from the meatus when the injected fluid first begins to escape, we can judge of the length of the canal beyond the sphincter, and on subsequent occasions limit the injection entirely to the prostatic and membranous portions, if we see fit.

Injections thus limited to the deeper portions of the urethra, excite but little pain. In this respect, they differ widely from the effect of injections of the same strength into the spongy portion. For instance, if we inject a solution of five grains of nitrate of silver to the ounce of water by the ordinary method, the patient suffers considerably, but if we inject the same solution into the deeper portion of the urethra, and limit it to this region, but little, if any, pain is experienced. In this respect, the urethra corresponds to other mucous canals, which are generally most sensitive near their external outlet. The chief sensation following the injection, is an urgent desire to empty the bladder, and this is often so intense, that it cannot be resisted. It is important, however, to delay micturition as long as possible, so as to give the injection time to act before it is neutralized by the passage of the urine. Diday advises that the patient be compelled to leave the office, and find his way home before accomplishing the act. During the following twenty-four hours, the desire to pass water is somewhat more frequent than ordinary, but no pain of any consequence is experienced. The discharge for a few hours after the injection is slightly increased, and more purulent, but these symptoms pass off in the course of a day. It is thus seen, that injections limited to the deeper portions of the canal are unaccompanied by many of the unpleasant effects which attend caustic injections of the anterior portion of the urethra. MM. Bonnet and Diday, of Lyon, highly recommend injections executed in the manner now described, in cases of spermatorrhœa, in place of Lallemand's *porte caustique*. They state that they are equally efficacious, and not liable to confine the patient to the bed, nor to excite severe pain, hemorrhage from the urethra, or retention of urine, as Lallemand's instrument often does.

In using these deep injections, I have confined myself chiefly to a solution of nitrate of silver, of the strength of five grains to the ounce of water ; but I have also employed a solution of sulphate of zinc, of the strength of from five to ten grains to the ounce. They may be repeated every two or three days, and, in the meanwhile, the patient may use injections by the ordinary method, if the anterior portion of the canal appear to be also involved.

In addition to the formulæ for injections already given, when speaking of gonorrhœa, I will add the following :

℞ Hydrargyri bichloridi, gr. j.
Aquæ puræ, ℥viij–xij.
M.

℞ Gallæ, ʒj.
Aluminis, ℈ij.
Aquæ, ℥viij.
M.

℞ Acidi nitrici, gtt. xvj–xl.
Aquæ, ℥viij.

℞ Tinct. iodinii, gtt. viij.
Aquæ, ℥viij.
(Ricord.)
M.

℞ Ferri iodidi, gr. viij.
Aquæ, ℥viij.
(Ricord.)
M.

Ricord advises the last two formulæ to be used in gleet in scrofulous subjects, but the iodine can hardly be supposed to have any specific action, when injected into the urethra.

Blisters were long ago recommended for the cure of obstinate cases of gleet, but they had almost fallen into disuse, when they were revived by Mr. Milton, in his work on the treatment of gonorrhœa. This author speaks of them in the following exalted terms : "I have seen two blisters, with a mild injection or two, at once cure a clap which had defied the most energetic treatment ;

and *as I never found a case which resisted blistering and injections together, that was not complicated with stricture or affection of the testicle, I am slowly arriving at the conviction, that every case of clap or gleet, however obstinate, may, if uncomplicated, be cured by blistering singly or combined.*"* It is to be feared, however, that this remedy has proved less successful in the hands of other surgeons than in Mr. Milton's. Recent writers who have spoken favorably of them, appear to have done so chiefly on Mr. Milton's authority; others, as Mr. Langston Parker, have given their testimony decidedly against them. My own experience with blisters has not been so satisfactory as Mr. Milton's, though I have not, perhaps, used them sufficiently to enable me to speak confidently of their efficacy. I have employed them in about a dozen cases, but have not found them attended with such a degree of success as to lead me to prefer them to other and less disagreeable modes of treatment. They are still, however, worthy of a trial, in cases which have resisted the use of bougies and injections.

The manner of employing them is of considerable importance. The hair about the root of the penis should be cut short with scissors. A piece of paper is then to be wrapped entirely around the penis, and cut so as to form a pattern of its surface from the pubis to within half an inch of its extremity. This pattern is to be laid upon the blister, which is to be cut out in a corresponding manner, applied to the penis, and retained in place by a string wound around it. If the blister be left on the same length of time that it is usually applied to other parts of the body, or if it be allowed to slip out of place, and come in contact with the scrotum, severe pain will be excited, and a nasty, disagreeable sore be produced, which will be apt to disgust the patient with the surgeon and his treatment. Hence, the time during which the blister is applied should be limited, and the patient should keep quiet while it is on. I prefer to apply the blister in the morning, lest the patient be deprived of sleep, and an application for a period of two hours is sufficient. After the lapse of this time, the surface will be found to be reddened, but not vesicated, unless, perhaps, in a few small spots. The blister should now be removed, and the penis covered with a rag spread with simple cerate, and still farther protected from friction by an external layer of cotton wadding. On examining the parts after a few hours, it will be found that numerous bullæ have formed on the surface which at first appeared to be only reddened. These may be pricked, and the serum which they contain evacuated, but the epidermis should be carefully preserved. I have sometimes found the extremity of the prepuce beyond the site of the blister, puffed out with an effusion into its cellular tissue. This effusion may be left to take care of itself, or, if excessive, be evacuated by a few punctures with a lancet.

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* The italics are in the original.

Cantharidal collodion is a more convenient application than the unguentum lyttæ, but its effect cannot be limited like that of the latter, which should therefore be preferred. When thus applied for a few hours only, I can confirm Mr. Milton's statement, that blisters do not excite severe pain nor produce a troublesome sore. The first effect of their application is to increase the urethral discharge, which can only be expected to be benefited in the course of five or six days. The blister may be repeated at the end of a week, if any discharge still remain. The perineum may be blistered in a similar manner, but this will require the patient to be kept in bed until the vesicated surface has healed.

These, gentlemen, are the most approved methods for the treatment of gleet. Other modes of treatment require only a passing notice.

A fresh clap supervening upon an old gleet not unfrequently cures the latter ; hence some surgeons are in the habit of taking measures to aggravate the discharge in gleet and render it acute, with the hope that the gleet will disappear on the subsidence of the acute inflammation. Acute inflammation may readily be induced by cauterizing the urethra with Lallemand's *porte-caustique*, or by injecting a solution of ten or fifteen grains of nitrate of silver to the ounce of water. This treatment corresponds to the abortive treatment of the first stage of gonorrhœa. I have not obtained very satisfactory results from this method ; in most cases I have found the gleet persist after the subsidence of the acute inflammation, and I now rarely, if ever, have recourse to it.

It has been proposed by several authors to introduce meshes of lint, by means of a probe, into the urethra, so as to separate the affected surfaces from each other, on the ground that their contact doubtless assists in keeping up the disease. Long and narrow bags of gold beater's skin have also been made, which after their introduction, could be inflated with air or water. Such treatment, however, is very uncertain in its effects, and very disagreeable in its application, requiring to be renewed after each passage of the urine.

Finally coitus has been suggested as a remedy for gleet. Sexual intercourse does occasionally cause the disappearance of a gleety discharge, but it is more likely to increase it, and on the ground of morality is deserving of the highest reprobation.

Lecture VIII.

Balanitis: Its causes, symptoms, and treatment.

If the prepuce be retracted, a mucous surface of considerable extent is exposed, a portion of which covers the glans penis, and the remainder consists of the internal reflection of the prepuce. This surface may be the seat of disease, similar to that which has been described as affecting the urethra. If the disease be confined, as it sometimes is, to the membrane covering the glans, it is properly called balanitis ; if to the internal surface of the prepuce, posthitis, and if it involve both, balano-posthitis ; all these varieties, however, for the sake of convenience, are commonly included under the one name, balanitis. Gonorrhœa spuria, balanopreputial gonorrhœa and external blennorrhagia are other terms by which this disease was formerly known.

Persons who have a long prepuce and in whom the glans penis is habitually covered, are especially liable to balanitis, for the protection which the mucous membrane constantly receives from contact with the clothes and air, renders it abnormally delicate and sensitive. This is, of course, especially the case with men whose preputial orifice is naturally so contracted that it is impossible ever to uncover the glans, or who have, in other words, congenital phymosis. But this condition of the parts not only predisposes to balanitis, but often gives rise to an exciting cause of this disease. The secretion from the glandulæ odoriferæ, situated in the furrow at the root of the glans, which is so copious in all men as to require daily removal, gradually collects and concretes, until a mass is formed which acts like a foreign body and excites inflammation of the surrounding mucous tissue. In several instances I have known balanitis dependent upon this cause, mistaken and even treated for gonorrhœa of the urethra.

A gentleman, affected with congenital phymosis, once applied to me for treatment, stating that six months before, while in South America, he observed a purulent discharge from the end of his penis. He had not had connection with a woman for six weeks, and, to use his own words, "did not know what to make of it." He applied to a physician who told him he had a clap, and gave him an injection and a mixture of copaiba. The discharge became no better, and on his passage across the Isthmus, a few weeks before I saw him, he consulted another doctor, who gave him another injection and told him to take copaiba capsules. He had now been pursuing treatment for six months, and was no better than when he began. On examining the parts, I found the preputial orifice was so small that it was with some difficulty that I could expose the meatus. After succeeding in doing so, however, I wiped away the discharge with which it was smeared, and made pressure from behind forwards along the course of the urethra. This manœuvre failed to produce any farther matter, but by pressing the prepuce against the glans, I found I could squeeze out an abundance. I told my patient that he had no gonorrhœa, and that all that he required to cure his complaint, was to be circumcised. He submitted to the operation the following day, when I found a large collection of sebaceous matter beneath the prepuce. With the healing of the incisions, all traces of his disease disappeared. It is probable that this man never had any urethral gonorrhœa at all.

In general, the causes of balanitis are nearly the same as those of gonorrhœa of the urethra, and after the full exposition of the latter which I gave you in a previous lecture, it will be unnecessary to dilate on the former. They may be enumerated as follows: intercourse with a woman who has leucorrhœa; intercourse with a woman just before, during, or just after her menses; intercourse with a woman having gonorrhœa; excessive intercourse with a woman apparently, in every respect, well; masturbation, prolonged exercise on foot or horseback, and errors in diet. To these should be added want of cleanliness and the presence upon the glans or preputial fold, of a chancre, vegetation, mucous tubercle, or any secondary or other eruption.

A patient with balanitis, complains of tenderness of the end of the penis, an itching or tingling sensation within the preputial orifice, and smarting in passing water if the urine come in contact with the inflamed surface after its exit from the meatus. If we are able to retract the prepuce, we find the mucous surface reddened, sensitive and denuded of its epithelium in patches. These superficial excoriations are generally of a darker red than the surrounding surface, the latter often being of a whitish color, owing to the epithelium being slightly raised but not yet detached. They are generally multiple and irregular in outline, and are of the same character as the superficial ulcerations met with upon the os tincæ in women. The affected surface is covered with a muco-purulent secretion, which varies in quantity and consistency in different cases. When the preputial orifice is so narrow as not to afford it free exit, it may collect in the corona glandis and form an abscess, requiring a puncture through the prepuce for its evacuation. In addition to the above symptoms, we find, in severe cases, more or less œdema of the prepuce, which is puffed out by infiltration of serum into its cellular tissue, and phymosis may exist even when not congenital. The inconvenience excited by an attack of balanitis is comparatively slight, and the disease is very amenable to treatment and of short duration. There is rarely any constitutional disturbance, and the glands in the groin seldom become inflamed, or if they should become slightly enlarged and sensitive, they rarely, if ever, suppurate.

Balanitis is a disease which is very liable to recur. One attack seems to leave a predisposition in the parts to the occurrence of another, and the influence of a long prepuce or congenital phymosis is more evident in producing these relapses than in giving rise to a first attack. Thus we find men who have arrived at the age of thirty or forty years, with this malformation, who have never had balanitis, but who, after having one attack, are continually subject to others, following the slightest provocation, such as intercourse with their wives, or even mere imprudence in diet.

The excoriations of the surface met with in balanitis, bear a close resemblance to one form of chancre, viz., the superficial chancre; indeed, excepting the fact that the excoriations of balanitis are commonly multiple, while the superficial chancre is generally single, and that the latter, if of the infecting type as it almost always is, is indurated and attended by induration of the lymphatic ganglia in the groin, I know of no practical and ready method of distinguishing the two. This resemblance will be better appreciated when we come to describe this form of chancre. The danger lies, not so much in mistaking balanitis for a chancre, as in overlooking a chancre, especially when its presence has excited inflammation of the surrounding surface, or in regarding it as a simple excoriation due to the balanitis. This has doubtless been the error in many of the reported cases of successful inoculation of the muco-pus of balanitis, which is, in fact, purely a simple disease, entirely free from any specific qualities. M. Diday, in his work entitled *Nouvelles Doctrines sur la Syphilis*, has shown how destitute of foundation is the opinion of Vidal and others to the contrary.

When the prepuce can be retracted, the treatment of balanitis is exceedingly simple. All that is necessary, in most cases, is to free the parts from any collection of matter by gently washing them with tepid water, and then to cut a piece of lint or soft linen into pieces about an inch square, and laying them upon the glans with their upper margin well up in the corona, to draw the prepuce over them. In this manner the inflamed surfaces are isolated from each other, and speedily take on a more healthy action. The frequency with which this application should be repeated depends upon the copiousness of the discharge; generally from two to four times in the twenty-four hours is sufficient, and a cure is usually attained in a few days or a week. In severe cases, however, some farther measures, besides those mentioned, may be desirable. If the surface be much excoriated, it is well to pencil it over lightly with a crayon of nitrate of silver, or to make an application of a solution of this salt, of the strength of a drachm to the ounce of water. Again, instead of using the lint dry, it may be moistened in one of the following mixtures:

℞. Liquoris plumbi diacetatis, ʒj.
Aquæ puræ, ʒij.
M.

℞. Liquoris sodæ chlorinatæ, ʒiij.
Aquæ, ℥v.
M.

℞. Acidi tannici, ʒj.
Glycerin, ℥j.
M.

℞. Extracti opii, ℈j.
Zinci sulphatis, gr. vj.
Glycerin, ℥j.
Aquæ, ℥ij.
M.

When phymosis, either congenital or acquired, exists, the parts are less accessible to treatment. In this case the nozzle of a syringe holding several ounces and filled with tepid water, should gently be inserted between the glans and prepuce, and its contents be discharged into this cavity,in order to free it from all collection of matter. A few drachms of a solution of nitrate of silver, or of one of the lotions just mentioned, may then be thrown up, and this should be repeated several times in the course of the day. In these cases, Mr. Langston Parker highly recommends the following preparation, which is to be introduced between the glans and prepuce by means of a camel-hair pencil:

℞. Cerati simplicis, vel mellis,
Olei olivæ, aa. ℥j.
Hydargyri chloridi, ʒss.
Extracti opii, ʒj.
M.

If balanitis be attended by much infiltration into the cellular tissue of the prepuce, the serosity should be evacuated by several punctures with a lancet. If the patient can keep his bed, the penis may also be enveloped in a single thickness of linen, which is to be kept wet with cold water or diluted Goulard's extract, and exposed to the air. If, however, he continues his daily occupation, no benefit can be expected from such applications, which, when confined by the clothes, act like poultices and favor rather than prevent œdema. In all cases the cure of balanitis will be accelerated, if the patient be kept quiet and the parts elevated. When this disease is dependent upon the presence of a chancre, secondary eruptions or vegetations, these should receive their appropriate treatment.

With persons who have repeated attacks of balanitis it becomes an important object to take measures to prevent them. To accomplish this the strictest cleanliness should be enjoined. The parts should be carefully cleansed of all accumulation of their natural secretion twice a day, and, after doing this, they may be wet with an astringent lotion, as a mixture of equal parts of brandy and water with the addition of alum, or with a solution of tannin, or with any of the astringent washes already mentioned. It is also desirable to attend to the digestive functions, and to direct the diet to be simple. The influence of a long prepuce in producing relapses of this disease has already been referred to. I have sometimes succeeded in remedying this by directing the patient to keep his prepuce constantly retracted by means of a narrow bandage around the penis, posterior to the glans. If this be worn for a few weeks, the prepuce will often remain retracted without further assistance, and the mucous surface of the glans becomes hardened by exposure and friction. If this attempt prove unsuccessful, our only resort is the removal of the superfluous integument by circumcision.

CLINICAL REPORTS.

ACADEMY OF MEDICINE.

REGULAR MEETING, OCT. 5, 1859.—DR. WATSON, *President.*

YELLOW FEVER.

Dr. Griscom said :—On the present occasion, under the terms of the resolutions* before us, one only of the numerous points of this knotty subject is presented for discussion, and to that I purpose to confine my remarks. The resolution declares in effect, that yellow fever *is not personally communicable.* In its own language, it says, "in the absence of any evidence establishing the conclusion that yellow fever has ever been conveyed by one person to another." Mark the precision of the language—"evidence, *establishing* the conclusion."

We have had presented to us some evidence to the contrary, but it was declared by Dr. Benjamin Rush, just 60 years ago, after the epidemic of 1799 in Philadelphia, that "out of upwards of 1000 persons who have carried the disease into the country from our cities, there are no more than *three* or *four* instances to be met with of its having been propagated by contagion."

If so important a question is to be determined upon testimony so rare and disproportionate as this, where the witnesses *pro* are only three or four to the *thousand con,* surely we may be allowed to hesitate before deciding it against the liberty of the subject of the disease. But Dr. Rush was at that time a non-contagionist, and we may therefore be cautious respecting his statements. Yet if we examine the testimony adduced in favor of the personal communicability of the disease as furnished by its advocates themselves, we shall find it lacking in much that is essential to a satisfactory solution of the question. Such an examination I do not propose now to make in extenso;—abler critics have passed their judgments upon the various items. But one point I may mention, as presented in the cases cited by that ablest of American contagionists, the late Dr. David Hosack, as worthy of special attention. I refer to the entire absence of any allusion to the possibility of *fomites* having had any part in the production of the disease in the cases quoted. In the instances referred to by Dr. Hosack in his paper on the "laws of contagion," in the transactions of the Literary and Philosophical Society, from Rev. Dr. Moore, and Dr. Caspar Wistar, this deficiency is most marked, and the personal contagious property of the disorder in those instances is assumed without any inquiry into the probability or even possibility of the clothing and effects of the patients having been the vehicle of the poison to others; and this too, though the patients had fled from infected districts after a residence long enough therein to have imbibed it into their own bodies, and may reasonably be presumed to have carried their clothing and other effects with them in their flight.

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* Whereas, The National Quarantine and Sanitary Convention, held in this city in the month of April last, adopted a resolution in the words following, to wit—

"*Resolved,* That, in the absence of any evidence establishing the conclusion that yellow fever has ever been conveyed by one person to another, it is the opinion of this convention that personal quarantine of cases of yellow fever may be safely abolished ; provided, that *fomites* of every kind be rigidly restricted."

—Therefore, *Resolved,* That the opinion expressed in said resolution is concurred in and adopted by this Academy.

On the other hand there are strong grounds for the opinion, in the Germantown cases reported by Dr. Wistar, that clothing from the infected city might have been, or was, the vehicle of the disease; for it is distinctly stated, that the mother, whose daughter had lived in the infected portion of Philadelphia, and died of the fever in a few days after getting home,—that this mother, Mrs. Johnson, had "assorted the clothes of her deceased child," and afterwards took the disease and died. Now, although the case of this mother is accepted as one of personal contagion, the existence of the child's clothing *as fomites* is wholly ignored, and the same oversight occurs with regard to others who died at the same house about the same time.

Next to Dr. Hosack, perhaps the most ardent and unflinching of the advocates of the contagious property of yellow fever, is his pupil, our highly esteemed and most worthy associate, Dr. John W. Francis, our regard for whose personal and professional character demands for all he says the most attentive consideration. I would therefore occupy a few moments in paying my respects to one of the cases relied upon by him as evidence of the doctrine which he upholds. It is his own case which he has related to us upon this floor, and also before the late Quarantine and Sanitary Convention. That I may not mistake the case, I quote all that relates to it from the report of his speech before that convention, as revised by himself. It is as follows:

"Of the fever of 1795, I shall state my own individual case to illustrate its communicability. My father contracted the disease in October of that year, and died on the 23d of that month. The day before his death I was seized with the pestilence. I could never learn that the infected district had invaded that part of our city, in which was our residence, near the head of Pearl street, nor that I had, as a child, aged six years, wandered at all from the premises. Personal communication about the sick-bed of my father had engendered the disease. I was informed that my prescriber was Dr. Wm. Pitt Smith, who died shortly after, of yellow fever. I narrowly escaped, and well remember my coffin set up in the corner of the room; for in those days of dismay the patient was scarcely dead before interment took place; you were hardly cold before the grave received you; such was the dispatch with all classes of citizens."

To this recital the same objection lies as against the others, that nothing is said about the *possibility* of the disease having been communicated from father to son through the clothing brought by the former from the infected district, where he doubtless imbibed the poison, which he carried home with him, and caused his own death.

So also the case, reported by Dr. Fenner (in the *Transact. Amer. Med. Association*, vol. vii., p. 539), which is the only one quoted by Dr. Dickson in the second edition of his *Elements of Medicine*, p. 274 in support of his opinion as to its contagiousness, in the following language: "A Mr. McManus, who lived on the hills of Hinds Co., more than 40 miles from Vicksburg, went down to that city and remained there several days in 1841, when it was severely scourged by epidemic yellow fever. Returning home he was soon attacked by yellow fever, of which he died after throwing up black vomit. A few days after his death, his wife, who had nursed him assiduously during his illness, and had not been away from home, was attacked in a similar manner, and died with black vomit and yellowness. Their residence was in a high and healthy locality, where yellow fever was never known to prevail. Now, it is evident," says Dr. Fenner, "that Mr. McManus contracted his disease in Vicksburg; but if *any one can doubt* that Mrs. McManus caught the same disease from him, I must *confess it is more than I can do*."

Now here again nothing is said about the infected clothing or merchandise. which the patient carried home with him, and yet upon such *negative* testimony, Drs. Fenner and Dickson yield all doubts.

In illustration of the absurd extent to which the sentiment of the contagiousness of yellow fever will sometimes be carried, and as an offset to the case just given, I will quote the case of my own father, who was attacked in Philadelphia in the disastrous epidemic of 1793. He was pursuing his mathematical studies, when the disease appeared. I give his own account:

"I continued until no one but myself remained, and until my teacher himself was seized with fever and confined to his bed. He considered his recovery, I apprehended from the beginning, to be doubtful, and furnishing me with the outlines of his will, desired me to prepare it in due form. Having assisted him in signing it, and perceiving him to be very ill, I was induced, although very desirous to remain with him and assist his wife in nursing him, to yield to their advice and leave the city. . . I embarked in a sloop for Alloway's Creek, and spent one night on the water, and on the following night I was seized with a heavy chill, followed by high feverish excitement, which was considered as an evident attack of the disease from which I had fled. My parents, eight miles distant, were informed in the morning of my situation, and no time was lost in sending for me.

"My situation excited much sympathy in the town of Salem (N. Jersey), where I was pretty well known, and the attendance of my physician, who resided in the town, was very assiduous, until the fears of the inhabitants for his and their own safety, laid him under a positive interdict, as I grew more and more ill, no longer to enter my room or to go inside of the house. The very atmosphere of our dwelling was considered to be infected, so that travelers along the road, apprised of my illness, would climb over the fences and make a wide circuit, to avoid the danger. But my physician, Dr. Rowan, though prohibited from seeing me, or coming to the house, continued his daily journeys to a tree, above a quarter of a mile distant, where he met my father, learned the symptoms, and prescribed what he thought best. The disease terminated in a dysentery, which being suitably treated, I began rapidly to recover, and was soon restored to health."

No other person in the house took the disease. Seeing, then, such omissions and admissions as these, may we not concur in the idea expressed in the resolution, as to the absence of evidence "*establishing* the conclusion that yellow fever has ever been communicated by one person to another." How *can* any one maintain the idea of contagiousness upon such evidence as this?

In the next place, I would present a single argument against the *possibility* of yellow fever being a contagious disease. This argument I have seen alluded to only in two works—that of Prof. Smith on Epidemics, and that of Dr. La Roche on Yellow Fever—and yet, in neither, in my judgment, is the argument pushed so completely to its conclusion as it appears capable of being, and it seems, to my mind, that had it been presented in its full effect, the mooted question might have long ago been settled.

To understand fully the nature of the argument, we must first know the real meaning and application of the word "contagion," as now generally received.

Whatever may have been the views of the earlier medical philosophers, as to the precise meaning to be given to the word, or however it may have been confounded with infection, the modern application of it is clear and precise. Nowhere, probably, shall we find a more distinct and comprehensive definition of it than in the first four lines of the body of the work entitled, "*Elements of the Etiology and Philosophy of Epidemics*," by Joseph Mather Smith, M.D. This definition is in the following words:

"*Contagion is a poison generated by morbid animal secretion,* *possessing the power of inducing a like morbid action in healthy bodies, whereby it is reproduced, and indefinitely multiplied.*"

Accepting this definition, we perceive, 1st, That it is a *secretion* (not a mere excretion), the product of a *living animal action;* 2d, That it is a morbid product, i. e., the result of a diseased action; and 3d, It possesses the power of inducing a like morbid action in healthy bodies, and of multiplying and reproducing itself.

Applying this definition to certain well known diseases—small pox for instance, or measles, or scarlatina—and we have a full and distinct comprehension of its different points. The virus of variola, whencever it came originally, responds completely to them all. It is a poison reproduced in and secreted by a *living*, not dead, or decomposed tissue; it is an animal and not a vegetable production; infused into a healthy body, it reproduces *small pox et præteria nihil.*

By the same author, contagion is contradistinguished from infection by applying the latter to the *product of the decomposition of animal and vegetable substances*, taking the same view of the distinction as did Dr. Richard Bayley, in 1796, and although other authors differ as to the most appropriate application of the word infection, some, as Wilson Philip, and Dr. Bateman, the supposed author of the article, "Contagion," in Rees's *Cyclopedia*, appropriating it to "the *act of communication* of the disease;" yet the definition of the word contagion, as given by Prof. Smith, is the almost universally accepted one, and, with few exceptions, the same may be said of infection, and is evidently the most free from objection.

But, to be the product of *decomposition*, the *vitality* of the decomposing substances must first be destroyed. No time need be spent in the elucidation of these points, since they have been ably discussed by some of the authors alluded to, and I content myself with the remark, that these definitions and distinctions appear to me to constitute the really correct interpretation of these pregnant words.

Let us, then, apply them to the case before us. The first question which arises is this: Admitting the broad distinction thus drawn between these two sources of disease, contagion and infection—the one the product of living animal action, the other the result of the decomposition of dead animal or vegetable matter, or of both combined—can these two classes of poisons, so distinct in their chemical and physiological characteristics, produce the same results, when absorbed into the healthy body? Are they convertible influences?

For example—can the *marsh miasm*, which is the source of intermittent fever, by passing through the living body, cause the elimination of a poison capable of reproducing itself, or the miasm which is the cause of the more pernicious remittent, from Panama and other parts of the Isthmus, which for several years past has crowded our hospitals, did it ever, or can it, by being distilled through the animal alembic, generate a poison capable of producing the same disease in another? Every one knows to the contrary.

It may be stated as a medico-etiological axiom, that *two different and distinct causes cannot produce the same effect.*

Now, what is the original source of yellow fever? I say the *original* source—is it a secreted animal poison, generated by morbid animal action? On the contrary, it is universally accredited, even by the advocates of its contagious power, to a poison derived from vegetable putrefaction. By those who believe it to be exclusively an imported disease, as by those who consider it wholly of domestic origin, as well as by those who regard it as both exotic and indigenous, its original ultimate source is thought to be no other than vegetable decomposition, terrene exhalations, or both combined, aided and controlled by certain meteorological circumstances. Not one writer, within the range of my observation, has ever attributed it to an animal poison secreted by the living body, and probably not one could be found, even in the ranks of the most decided contagionists, to hazard the expression of an opinion to that effect. If, then, it has no other origin than vegetable putrefaction or terrene exhalations, it cannot, according to the axiom before announced, have any other source; and, furthermore, admitting, for the sake of the argument, that a body laboring under yellow fever produces any secretion, or aura, or poison in any shape (though this has never been proved), that poison has a living animal, and not a dead vegetable origin, and it cannot produce the same disease as the original poison produced; and it must, therefore, if anything, produce something *different from yellow fever*, which is a specific disease, the result of one specific cause—*Quod erat demonstrandum.*

Such, Mr. President, is, I think, the true philosophical basis upon which this question should be discussed. If the principle which I have stated, viz., that two different and distinct causes cannot produce the same disease, is not merely an apothegm, but has the force of an axiom, as I claim for it, then there is an end to this long waged dispute respecting the contagious property or capability of yellow fever.

NEW YORK PATHOLOGICAL SOCIETY.

REGULAR MEETING, SEPT. 14.—DR. DALTON, *President.*

Reported for the New York Journal of Medicine.

BY GEORGE F. SHRADY, M.D.

Rupture of the Aortic Valves.—Dr. Sands presented the heart of a policeman who died yesterday afternoon. Four weeks ago he received injuries, supposed to have some connection with his death.

It appears that four weeks ago last Saturday night, he was attacked by a person whom he was endeavoring to arrest, and very severely beaten. Notwithstanding the injuries, he made good his capture. After this he remained on duty for forty-eight hours. He then complained of pain in his chest, and was allowed to go off duty, and was attended by Drs. Fisher and Wells, Police Surgeons. No disease could be diagnosed, except general injury of the chest. Ten days after that there were signs of pleuritic inflammation, and a systolic murmur could be heard in the region of the base of the heart. The pulse at this time was about 80; it continued not less than 80, and towards the last week increased to 135–140. During the last few days, however, the pulse was so rapid that it could not be counted. The man died last evening. Death was preceded by fever, a high pulse, and pretty constant, though not uninterrupted dyspnœa.

On examination of the chest a large amount of serous effusion was found in the pleural cavity; the lungs compressed. The pericardium contained two or three ounces of serous fluid. The principal lesion was found in the aortic valves. Upon examining the specimen, it will be seen that but one of the valves remain intact. Of the other two valves, one is almost entirely gone; the other has a large rent, extending through nearly the whole of its length; near the margin it is unbroken and has its ordinary aspect. The other valve, that one opposite the right coronary artery, is the seat of fibrinous deposit. The endocardium in the vicinity is torn.

There is very little doubt that the rupture took place at the time the man received the injuries, thus indirectly leading to his death.

Rupture of Chordæ Tendinæ.—Dr. Dalton related a case, very interesting in this connection, where a rupture of the tendinous chords attached to the anterior fleshy columns took place. The patient was a man about forty years of age, tall and spare; his previous history being unknown, as he was a stranger in the city. He was found unconscious in bed. Dr. Budd saw him first; breathing stertorous; pulse however had some force. Death took place some three hours after the attack. On applying the ear to the præcardium a bellows murmur was found, loudest at the base; throbbing of the carotids well marked.

The post-mortem examination revealed extravasation of the blood on the *surface* of the brain. No calcified arteries could be discovered in the brain. The heart contained no clots, or fibrinous material. The cavities of the right side were distended with liquid blood. The whole organ showed nothing abnormal but the above lesion—*rupture of the chordæ tendinæ.*

A similar case was related by Dr. Clark, where rupture of the tendinous chords had been suspected some weeks before the patient died, and was verified by the autopsy.

Remarkable Case of Adipocere.—Dr. Dalton presented a body which had undergone complete transformation into Adipocere. As far as could be ascertained the body was buried in 1832. It was found in a cemetery, or rather a pit in the upper part of the city, which was dug out for the reception of cholera patients. The bodies were placed in separate coffins, but not in separate graves. The coffin containing this body was found about twenty feet beneath the surface; underneath it there were three tiers of coffins, and above it nine or ten. The uppermost tier of coffins was covered by three or four feet of solid earth. The soil directly under the coffin in which the body was found, was very watery; above this level there was but little water, although the ground was very moist. The bones of the bodies contained in this pit, and in some cases the tendons were melted together in a semi-fluid mass, the usual result of decomposition under ordinary circumstances.

At the water mark there were several bodies converted into this Adipocere. The specimen presented, however, was the most perfect. The hands and feet have been rattled off during transportation. When the body was first taken out, its color was almost precisely the same as now—(a dullish white)—if anything, it has become a little more brownish. It has now been exposed to the air for three months. Its consistency was decidedly less, when first removed; it was then like cheese of medium consistency, a mixture of the ductile and the brittle. In handling it great care had to be used. At that time it exhaled a tolerable strong odor, partly cheesy, ammoniacal and earthy. Since that time the cheesy and the earthy odors have disappeared; the ammoniacal smell, however, is still perceptible. In other respects it appears not to be altered in the least, and Dr. Dalton presumes it will remain in the same condition for years, for centuries, if properly taken care of.

The body is that of a large fat woman, between 45 and 50 years of age, evidently a woman past the prime of life. The anterior parietes have sunk very much, particularly those of the abdomen, which appear to be in contact with the spinal column. The anterior portion of the chest is also collapsed. The change of animal tissue to the Adipocere is absolutely complete in all the tissues, except the hair, nails and bones. The papillæ of the skin can be distinguished, but the other tissues cannot be made out.

The substance of which this mass is composed is known by the name of Adipocere, or as the French call it, "*graisse de cadavre*," (fat of dead bodies.) It is exceedingly light, so that one can easily raise the whole subject.

It is somewhat curious that all the bodies which are reported as having undergone this degeneration, have been interred under precisely the same circumstances. The first case was observed in a similar pit at a cemetery in Paris.

The chemical composition of the substance is such, that it is regarded as an ammoniacal soap, sometimes soap composed of ammonia and lime, in other instances almost exclusively a lime-soap.

Orfila and Fourcry, who had paid particular attention to this subject assert that at first it is almost exclusively ammoniacal, the ammonia being supplied by the decomposition of the nitrogenized muscular tissue. This unites with the fat coming from the adipose tissue, which has become rancid, and produces an ammoniacal soap. Some French chemists regard it as a transformation of the muscles into oleic acid, so that Adipocere may be produced by simple decomposition of the muscular tissue. The more generally received opinion is that it is simple decomposition of the muscular tissue into ammonia, which unites with the fat of the adipose tissue. This opinion is favored by the fact, that in almost every instance of this kind the bodies are those of extremely fat persons. Such was the fact in a case, the only case of this kind which Dr. Dalton has previously seen, where the body was that of an enormously fat man. Another reason which makes it probable that the fat must come from the adipose tissue is that as Orfila ascertained, Adipocere does not take place, when the animal matter consists of muscular tissue only.

A body buried by *itself* will rarely be converted into Adipocere, because the ammonia compounds produced by the decomposition of the muscular substance are dissolved in the fluids of the body, and these fluids absorbed by the soil, and do not unite with the fats so as to form Adipocere. But if a body is surrounded by other bodies, the bodies above decomposing, produce ammoniacal fluids. These being washed down by the rain, filter through to the ninth or tenth coffin, the water of course in its descent becoming more and more loaded with ammonia, and this uniting with the fat of the lowermost bodies, produces Adipocere. The bodies under the surface of the water do not undergo the transformation, probably because the substance is soluble in water.

THE NEW YORK HOSPITAL.

Reported for the New York Journal of Medicine.

BY GEORGE F. SHRADY, M.D.,

LATE RESIDENT SURGEON.

Amputations, 8—*Thigh*, 2; *Leg*, 2; *Arm*, 1; *Ankle-Joint*, 2; *Shoulder-Joint* 1.—*Trephining*, 4—*Vesico-Vaginal fistula*—*Lithotomy*.

I shall confine myself in this report to the service of Dr. John Watson, for the months of April, May, June and July, in the first surgical division. During this time a number of cases have presented themselves, which, though by no means rare, are eminently practical.

There have been performed by Dr. Watson 14 capital operations, which may be classed as follows: 8 amputations, 4 cases of trephining, Sims' operation for vesico-vaginal fistula, and one case of lithotomy. There have been two or three interesting and important cases which are necessarily omitted in the present report.

Case 1—*Compound fracture of leg—amputation of thigh.*—Ellen S., 38 years of age, was admitted April 13, 1859, with a compound fracture of the right leg, caused by a fall down stairs. The opening, which was situated on the inner side of the leg, at the junction of the middle and lower thirds, was barely large enough to admit the end of the little finger, neither was the fracture itself very extensive. Were it not for the presence of two serious complications the limb might have been saved. In the first place, the posterior tibial artery was found to be ruptured, and in consequence the tissues of the limb became very tense from the effused blood. Secondly, the patient suffered from a rigid anchylosis of the knee-joint, which was flexed at a very inconvenient angle for the proper adjustment of the limb in a fracture box.

Amputation of the thigh was performed a short distance above the knee-joint, in consequence of the existence of the anchylosis referred to. The circular or conical method was adopted. The edges of the stump were brought together and strips of adhesive plaster applied, but as usual the sutures had to be removed at the end of a few days to allow the escape of sero-purulent fluid, and the stump was left open to heal by granulation. The patient improved from that time, the cavity filled up with exhuberant and healthy granulations under the influence of the stimulating dressings, and she was discharged cured on the 25th of July with a very handsome and serviceable stump.

In this case as in all other amputations of the thigh, if such a thing is possible, Dr. Watson always operates low down, for the reason that the periosteum in the lower third of the thigh is more firmly attached to the bone, and is not so apt to be stripped off, thus preventing the occurrence of necrosis. The space chosen is limited by the situation of the aponeurotic canal for the femoral.

Case 2.—*Compound fracture of ankle-joint—amputation.*—Daniel S., aged 35, was admitted with the above-mentioned injury, on the 12th June. A short time previous, while standing upon the rail track in a state of partial intoxication, a train of cars ran over him, causing him to sustain severe laceration of the left foot and ankle. On admission amputation was immediately performed at the place of election. The patient did well up to the end of the fourth day, when symptoms of pyæmia developed themselves, from which he died seventeen days after.

Case 3.—*Caries of ankle—amputation of leg.*—R. K., aged 21, entered the Hospital April 25th. Nine months previous he first noticed a pain and slight swelling of the right ankle, which interfered very little if any with his powers of locomotion. He accounted for it by supposing it was rheumatic in its origin, inasmuch as he could not refer it to any injury that he had received. This pain and swelling subsided after awhile, and the joint remained perfectly supple for the space of two months after, when he suffered from another like attack. The pain or swelling did not disappear, but began rather to grow more severe, and give him considerable trouble. Three months after the second attack an abscess formed over the internal malleolus, followed by a second one a short time after upon the opposite side in nearly the same situation, and also one to the inside of the tendo achilles. Each one of these abscesses left a sinus which communicated with bare bone. As the disease progressed the tissue around the joint became very œdematous ; and lastly the joint itself became secondarily involved in a sub-acute inflammation. This debilitated the patient to such an extent that there was but one thing to be done, and that was amputation. The leg was taken off at the place of election by the circular method, after which everything went on finely ; the patient's health showed signs of improvement from that time, and at the end of six weeks after the amputation, the parts healing by granulation as a matter of course, he was discharged cured.

Case 4.—*Compound fracture leg—amputation of thigh.*—Jas. L., aged 30. Just previous to admission he sustained a severe compound fracture of the right leg by the falling of a derrick. The seat of injury was at the junction of the lower and middle thirds ; the soft parts were very much lacerated, the posterior tibial could not be felt, and there was besides a great quantity of effused blood into the knee-joint, which determined the operator to cut above parts that would be to apt to give trouble if allowed to remain. The amputation was performed in the ordinary manner. The edges were brought together by sutures, and some point of the flap healed by first intention, while the remainder soon closed over, so that the patient was able to be discharged about six or seven weeks after his admission.

Here, to save a too frequent repetition I will state that Dr. Watson always amputates limbs by the conical or circular method, as he is satisfied that such a practice is attended with the best results. This conclusion he has arrived at after giving the flap operation a fair trial.

Case 5.—*Compound fracture of the wrist—Amputation of arm.*—L. E., æt. 54, was admitted on 18th April with a severe injury of the wrist of right side, caused by a circular saw. On examination there was found a wound which extended from the metacarpo-phalangeal articulation of the thumb, on its palmar aspect over the dorsum of the joint as far as its middle. The ossa semilunare and scaphoides were cut through, and the cavity of the joint entered. There did not seem to be much loss of sensation of the hand. The power of extension of one or two of the fingers was lost on account of the division of some of the extensors.

The radial artery was found to be divided, but the hand was not decreased in temperature. Taking everything into consideration the patient being of good constitution, and the wound being a clean cut, an attempt was thought proper to be made to save the hand by placing the forearm upon a splint, keeping everything quiet, and combating inflammation. The sequel, however, showed this to be of no avail. Abscesses formed in the neighborhood of the joint and burrowed in every direction, and the joint itself became the seat of destructive inflammation. This condition of things soon put to flight any idea of saving the hand, and it was accordingly removed by amputation through the middle of the forearm four weeks after the patient's admission. One-half the stump healed by first intention.

Case 6.—*Amputation at the ankle-joint—Symes' operation.*—Dr. Watson also performed two amputations at the ankle-joint according to Symes' method. The first, Margaret K., æt. 23, injured the right-foot by its being caught and jammed between a ferry boat and the dock, causing an extensive wound of the dorsum and compound comminuted fracture of the metatarsal bones. The amputation was performed shortly after admission in the usual way. a good flap was formed, the parts healed nicely and left a perfect stump.

The second was the case of a boy about 8 years of age, whose left foot was run over by a large truck. The sole was torn up by a wound which extended from the ball of the great toe to the heel, and the metatarsal bone, of the great, second, and third toes were badly crushed. The patient had a somewhat protracted stay in the house on account of the occurrence of Hospital gangrene in the stump, but at last was discharged cured, with a stump which if not a very handsome one, answered every purpose. The sutures of course had to be removed, and the flap after the separation of the slough was carefully moulded by strapping with adhesive plaster, very much to the credit of Dr. Bell.

Case 6.—*Amputation at the Shoulder-joint.*—The last but not the least of the amputations performed by Doctor Watson was a shoulder-joint operation upon a patient 29 years of age, with the following history: Pat. S., while in a state of intoxication, jumped from a train in motion and alighted upon a steep bank, rolled back, the wheel of the hind car passing over him causing the following injuries: an extensive scalp wound, a compound comminuted fracture of the left os brachii, extending from the elbow, which sustained a compound dislocation, to within a few inches of the shoulder-joint; a fracture of the sternum about its middle, fracture of eighth, ninth, and tenth ribs of left side, together with a compound fracture of the leg of that side. Reaction being sufficiently established the day after, and amputation of the arm being imperiously demanded, the operation, in consequence of the laceration of the soft parts which at one point extended into the joint itself, was performed at the shoulder, the double flap was resorted to, and notwithstanding the patient lost but very little blood, he had not sufficient vitality left to survive the shock, and died the same evening.

Case 7.—*Compound fracture skull—Trephining.*—Abraham W., æt. 52, fell down a hatch a distance of twenty feet, sustaining a fracture of the skull. When brought to the Hospital he was suffering somewhat from compression. A contused wound was discovered about one and a half or two inches long, posterior and superior to the left ear ; and a portion of bone at that point was found to be depressed. The patient with as little delay as possible was taken to the operating theatre, where the wound being enlarged, there was found an abrupt ovoid depression of bone three-quarters of an inch long by half an inch in breadth. The three-quarter inch trephine was applied, and the fragment was removed ; the edges of the opening being gnawed smooth by the rongéur. This instrument in all such cases is found to be very serviceable, and where it can be well applied, through an opening already in the skull it is often substituted for the trephine itself. Under those circumstances I am inclined to believe that the dura mater escapes being injured much more frequently, besides it is an instrument as far as I am able to judge that can be used with more *certainty than the trephine.* The dura mater in this case was not wounded. The amount of depression was about one line. The patient after the operation gradually waked from his slumber, and in the course of twenty-four hours was able to answer questions intelligibly. He continued to do well, to sleep comfortably at night, pulse ranging from 85 to 100, suffering only from time to time with a slight headache, until the 28th day after admission, when he was seized by a slight convulsion on the side of the face opposite the injury. This passed off after lasting but a few moments, but recurred again the fourth day after, when he became slightly delirious, nothing of note occurred until a month after that, if we except an occasional slight headache, when he was seized one day about noon with severe convulsions of left side of body, which lasted with short intermissions for five or six hours, during which time he became comatose ; leeches were applied to the head, stimulating injections administered, sinapisms to feet, but despite all the patient sank and died that evening.

The post-mortem examination showed that the cause of death was due to inflammation of the meninges of the right side of the brain, as was evinced by a very considerable thickening of the dura mater, the presence of subarachnoid effusion, and injection of vessels of the piamater. There was also found a thin clot which nearly covered the whole external surface of that hemisphere.

Case 8.—*Compound fracture of skull,—trephining ; recovery.*—John M., æt. 21, has the following history: About five o'clock in the afternoon of May 30th, patient was struck on the back part of the head by a piece of iron weighing seven or eight pounds. which was detached from a broken windlass, and had a fall of fifteen feet.

On the receipt of the injury patient was stunned, but ten minutes after was perfectly sensible. Half an hour after admission, he was able to give an account of the accident. There were then no symptoms of concussion, no paralysis of the limbs, no irregularity in the pupils, and the pulse was normal. A wound was found to be situated postero-superior to left parietal eminence an inch long, and communicating directly with an abrupt depressed portion, about two or three lines in depth, which covered an area equal to that of the thumb nail. The patient passed a very comfortable night, and at noon, the following day, in order to anticipate trouble, he was trephined. The trephine was first applied, the depressed portion raised, and, afterwards, the *rongéur* was brought into requisition. The dura mater was found to be injured, to the extent that would admit of an introduction of a probe. The case needs no further detail. The remainder of the case can be told in a few words ; he entirely recovered without a single unpleasant symptom.

Case 11.—*Compound fracture skull—trephining.*—L. M., 30.—Patient in an altercation with another, was struck upon the left side of the forehead by a cartrung, leaving a contused wound in that side, extending from the external frontal angle obliquely upwards and inwards, nearly as far as the median line. On examination of the wound after admission, a depression was found to exist. Patient was somnolent, pulse 70, and there was a good deal of ecchymosis of both lids. He had suffered from epistaxis previous to his admission.

At the operation, which was performed immediately, the wound was enlarged, and disclosed the existence of a stellated fracture, involving the frontal bone. The trephine and *rongéur* were brought into play, and the fractured portions were removed, leaving an opening in the skull wall three inches long, by one and one-half wide. The dura mater was found to be lacerated to the extent of half an inch, and through this opening a small quantity of lacerated and softened brain substance protruded. During the performance of the operation, a line of fracture was discovered to extend towards the orbit. This, taken in connection with the occurrence of epistaxis previously, looked towards an unfavorable prognosis. The lips of the wound were brought together in the usual way by adhesive straps, and cold water was applied to the part. The day after the operation, the patient was quite rational, notwithstanding he complained of some pain in the head. These symptoms continuing, the next day leeches were applied to the wound, but the symptoms increased, and he began to grow lethargic. The third day after the operation, paralysis of right side began to show itself. The fourth day, the left leg became paralytic, and towards evening he was seized with a series of convulsions, which terminated in death the day following.

I make the following extracts from the post-mortem examination by Dr. Hull. The opening in the frontal bone extended from the external angle, terminating in the median line two inches above the root of the nose. The laceration in the dura mater was large enough to admit the end of the finger. The dura mater of the left hemisphere was very opaque, and much thickened; underneath the arachnoid there was a layer of lymph, which extended over nearly the whole surface of that side of the brain. The brain substance at the site of the wound, was very much lacerated, and there was a good deal of loss of substance.

The brain being removed, the fissure extending downward before referred to was found to extend, as was supposed, through the orbital plate into the base of the skull. This fissure extended backward to the foramen lacerum anterius, thence across base of the skull to the opposite side. A line of fracture was also discovered to extend from the upper extremity of the opening in the skull towards and through a portion of the ethmoid bone, which accounted for the occurrence of epistaxis.

Case 12.—*Compound fracture of skull—recovery.*—Thos. F., æt. 19, was admitted August 12, 1859, with the above injury, which, he said was caused by the falling of a piece of rock against his breast, while at work in the Bergen Tunnel, and throwing him back upon his head. He, by all accounts, seems to have been perfectly conscious after the accident, and suffered in no way from concussion. On examination of the head, a wound of the scalp was discovered, which communicated with a fracture of the skull just above the occipital protuberance. This fracture was situated in the median line, and was, for the most part, linear in character, though, at its lower portion, it curved upon itself, forming a dent in the skull wall, covering an area of a ten cent piece. The depression was well marked, but *not abrupt*, and it was decided best, to leave the case without an operation, and watch for *grave* symptoms—a wise conclusion; the patient recovered entirely, and left the hospital a month after. The treatment consisted of absolute quiet, and free depletion.

Dr. W. is a strong advocate for depletion, by general and topical bloodletting in head cases, and, more especially, when the slow pulse is present, and certainly the results which attend such a practice are very gratifying.

Case 13—*Vesico-vaginal fistula—Sims' operation.*—Bridget M., aged 30, was admitted into the Hospital, the 17th of May, with a vesico-vaginal fistula, which she stated she first noticed about a year before, a short time after the birth of a large female child. The labor, according to her account, was a severe and tedious one. and it was found necessary to apply the forceps. From the time she first became aware of the existence of the unatural opening, she does not recollect to have passed her urine through the urethra. On examination there was discovered a transverse fistula in the median line, about one inch posterior to the meatus urinarius. An attempt was made to introduce the catheter through the urethra, which, after considerable difficulty, succeeded—this was supposed to be owing to an occlusion of the vesical orifice by a valve-like projection of the mucous membrane at that point becoming adherent consequent upon the previous injury to the parts. This obstacle being overcome, allowed the passage of Sims' catheter, after which the urine passed in the natural direction.

The sixth day after admission Sims' operation was performed. Some fringe-like granulations which surrounded the fistula and hung into the cavity of the vagina were reduced, the patient being placed in the position recommended by Dr. Sims, and his speculum used. The edges of the opening were brought together by four silver sutures, and secured in a way familiar to every one. A Sims' catheter was then introduced, and the patient urged to refrain from lying upon her back. The sutures were removed at the end of a week, but the parts were so slightly adherent that the fistula opened itself at the end of another week and necessitated the performance of the operation a second time, some two or three weeks after. Three silver sutures were this time introduced and secured by clamps as in the previous operation. At the end of a week, the sutures were again removed, the edges were found to have united firmly and completely. Shortly after this the patient was discharged cured.

Case 14.—*Vesical Calculus—lithotomy.—recovery.*—Wm. R., aged 26, entered the Hospital with a swelling of the scrotum, and an inflammation of the right epidydimis, which was the result of a very long walk he had taken a day or two previous. He was treated for this for a considerable length of time, during which it was ascertained that he had symptoms which looked like the existence of stone in the bladder. About two years previous to his admission he suffered from what seemed to be cystitis, the result of a somewhat protracted exposure to cold. The severity of the symptoms soon abated, but he suffered from frequent micturition. With the sound the presence of a calculus was clearly made out. When the inflammation of the epidydimis subsided he was prepared for the operation of lithotomy.

The patient being etherized, he was placed in the usual position. A grooved staff, with a blunt extremity, so arranged as not to slip off into the bladder was introduced into the urethra. The bilateral incision was made externally, while an incision was made through only one side of the prostate. The stone was then withdrawn, the finger being used as a director. This is the mode of operating preferred by Dr. Watson, who maintains that the incision gives a sufficient amount of space for the removal of almost any stone, if not, the other side of the gland can easily be divided. Besides, the transverse muscles of the perineum and all the large vessels are avoided. The wound healed readily and without deformity. The stone was oblong, 2½ inches in length by 1¼ in breadth, and weighed 1 ounce and 130 grains. It presents the gross appearances of the triple phosphate composition, and on being sawn open, there is discovered in its centre what appears to be a piece of cedar, about the diameter of a crow quill, 1½ inches in length, which formed the basis of the formation.

PART SECOND.

CRITICAL ANALYSIS.

A Practical Treatise on Enteric Fever; its Diagnosis and Treatment; being an Analysis of One Hundred and Thirty Consecutive Cases, derived from Private Practice, and Embracing a Partial History of the Disease in Virginia. By JAMES E. REEVES, M.D. Philadelphia: J. B. Lippincott & Co., 1859, pp. 199.

IT has always been a matter of regret, that country practitioners do not more often publish their observations upon the diseases prevalent in their localities. Our knowledge of certain epidemics must be derived principally from this source. Erysipelas, continued fever, dysentery, diphtheritis, and other diseases which often prevail in the rural districts, present to the intelligent observer such a detail of circumstances as to enable him to determine with great precision interesting points—the subject of controversy. Among the questions thus submitted to the country practitioner, is the manner in which certain epidemics spread, whether by contagion, infection, or the constitution of the air; the influence of locality upon the type of the disease; the causes which give rise to complications.

The author of this work, a practitioner in the northern part of Virginia, has ventured to publish his observations based upon one hundred and thirty cases of typhoid fever, as they occurred in his vicinity, but deems it proper, in the preface of the work, to apologize for his presumption. For reasons already given, we think his apology unnecessary, and we welcome his work all the more heartily, that it emanates from such a source.

Passing over the first four chapters, which relate principally to the symptomatology, symptoms, and lesions of typhoid, or as our author terms it, enteric fever, we find an interesting history of this disease in the various sections of that State. In Eastern, and South-Eastern Virginia, it seems to have supplanted the bilious-remittent, within the last twenty-five years. In the more Northern counties, its first appearance was later, and is now the more common form of fever, prevailing as an epidemic, frequently with great severity. The question of contagion is variously answered by the physicians of Virginia, though Dr. Reeves does not hesitate to declare his firm belief of its contagiousness. In proof of the correctness of his views, he gives an account of the origin and progress of the fever in Barbour county. The first case was a man from Athens, Ohio, who was brought home sick of a "slow-fever;" in three or four weeks, the mother, father, and three brothers, had the fever, and from this household, it spread to other families. The instances given to illustrate the contagious nature of this fever, are very striking, and we think, conclusive, having been personally cognizant of similar facts.

Of the mild form a majority of cases terminated between the thirteenth and eighteenth days ; of the intermediate form, between the eighteenth and thirtieth days ; the malignant form about the same as the last. One case continued sixty days, and terminated in recovery.

The rules prescribed for treatment are judicious, and give evidence of much experience. Veratrum viride, as a sedative, has proved very serviceable in the practice of Dr. Reeves.

In taking leave of this work, we commend the example of the author to country practitioners as worthy of imitation.

Anatomy — Descriptive and Surgical. By HENRY GRAY, F.R.S. Lecturer on Anatomy at St. George's Hospital; the Drawings by H. V. CARTER, M.D., late Demonstrator of Anatomy at St. George's Hospital. The Dissections jointly by the Author and DR. CARTER; with three hundred and sixty-three engravings on wood. Philadelphia : Blanchard & Lea, 1859, pp. 754.

THIS work is designed "to furnish the student and practitioner with an accurate view of the anatomy of the human body, and more especially the application of this science to practical surgery." To facilitate reference, the engravings are lettered, so that the name of each anatomical part appears in full upon it, giving in fact a perfect view of the anatomy of the human body. These engravings, which form the distinctive feature of the work, and, in our opinion, its chief excellence, are entitled to the highest commendation.

While it is true that anatomy is best studied upon the subject, and that the best anatomist always refers to actual dissection when in doubt, it is equally certain that a rough diagram often gives to the student an accurate and permanent impression of relative anatomy, and that the best teacher of anatomy is he who relies much upon diagrams to illustrate his lectures. Again, the practitioner is often entirely deprived of opportunities for dissection, and must confirm and correct his knowledge obtained by former dissections, by reference to accurate anatomical plates. In this view, we regard the work of Mr. Gray, as far better adapted to the wants of the profession, and especially of the student, than any treatise on anatomy yet published in this country. It is destined we believe to supersede all others, both as a manual of dissections, and a standard of reference to the student of general or relative anatomy.

To enable the student to apply his anatomical knowledge to practical points in surgery, the author has introduced under each sub-division of the work "such observations as show the necessity of an accurate knowledge of the part under examination." These notes will prove of great service also to the practitioner who may desire to refresh his memory upon points of practical interest.

The general appearance of the work is highly creditable to the publishers. The typographical execution is unexceptionable, and the engravings are for the most part elaborately finished.

Notes on the Surgery of the War of the Crimea, with remarks on the treatment of gunshot wounds. By George H. B. Macleod, M.D., F.R.C.S., formerly Surgeon to the Civil Hospital at Smyrna, and to the General Hospital in Camp before Sebastapol. London: John Churchill, 1858, pp. 439.

The War of the Crimea was in many respects the most remarkable in the annals of the human race. At a time of profound peace throughout the world, the most powerful and highly civilized nations array themselves for deadly conflict.

All that past experience could contribute to military tactics and stratagem, all that science has demonstrated in the use of deadly weapons, and all the methods that human ingenuity has devised for the destruction of life, were brought to bear upon the issue of this war with fearful energy. The nations of the earth beside were silent spectators of this mighty contest. The struggle came —the earth trembled with the gigantic tread of contending armies—the rivers ran red with human blood,, and human corpses strewed the plains and filled the valleys of the Crimea, fertilizing forever its sterile soil. Peace was restored, and that eventful struggle passed into the silent page of history. There are historians, not a few, who will record with minuteness and fidelity the battles lost and won, and trace with due discrimination the present and future consequences of this war upon the destinies of the contending nations.

But in the volume before us, we can alone learn at what expenditure of human life and human happiness this war was carried to its termination. If we mistake not, the medical historian alone can point the true moral of that war, and establish the true basis for the speculative statesman to form a just estimate of the advantages gained and lost.

The work of Dr. Macleod presents the medical history of the Crimean war with apparent accuracy and truthfulness; commencing with the history and physical characters of the Crimea, its climate and geology, it traces the war from the first landing of the troops to the fall of Sebastopol. In the first part of the work we have vividly portrayed the incompleteness of the medical arrangements of the army, the inefficiency of non-medical officials, and the disastrous results which followed. Although disease in its multiplied forms always proves far more fatal to armies than actual conflicts, in the Crimean war the per centage of deaths from this source was excessive. Frederick the Great said that fever alone cost him more men than seven pitched battles; and it has been estimated that during a campaign there will be about 10 per cent. sick. But it is recorded, to the shame of the British government, that in the Crimea, while the army was stationary, in a comparatively healthy climate, having its communications open, and within a few miles of the sea, the per centage of sick to strength rose to 39 per cent., for the whole body of infantry, to 45 per cent. for the troops serving in front, and for eight corps to the unheard of number of 73 per cent. This excessive sickness is attributable for the most part, to the deficient supplies of the common necessaries of life in the early part of the war. Food, clothing, fuel, etc., were stupidly withheld by non-medical officials at the most critical period, and the foundation was laid for such diseases as scurvy, cholera, typhus, dysentery—which afterwards devasted the army.

This total disregard of the comfort and health of the troops by officers in command, of which we have given an example, extended to the most minute particulars. In the location of the camp, in the arrangement of tents, in everything, indeed, that pertained to the physical well being of the soldiers, we find the same culpable ignorance or negligence.

The details of this portion of the work, reflect most discreditably upon the military system of England, which ignores its medical officers, except in the mere treatment of diseases. That government has yet to learn that in the health of its armies lies their true strength, and to maintain this, military hygiene as a branch of study must be pursued by its medical officers—*to whom should be intrusted all matters pertaining to the health of the individual soldier.*

The subsequent chapters of this work are replete with interest to the surgeon. The statistics of the wounds, operations, and surgical diseases of the army, with the remarks by the author, render the volume one of great practical value.

The style of the author is worthy of commendation, the narrative being concise, and the description graphic.

Pathological and Practical Observations on Diseases of the Alimentary Canal, Œsophagus, Stomach, Cæcum, and Intestines. By S. O. HABERSHON, M.D., London, Assistant Physician to Guy's Hospital, &c. Philadelphia: 1859, pp. 312.

THE literature of the physiology and pathology of the alimentary canal, has been enriched by the writings of some of the most able and experienced physicians of London. Alderson, Jones, Budd, Chambers, and Brinton, have added largely to our practical acquaintance with the physiology and pathology of digestion. To the list of authors mentioned, we now add another, Dr. Habershon, who is already know by his publications in Guy's Hospital Reports.

This work is divided into sixteen chapters, embracing the following subjects :—Disease of the œsophagus ; functional and organic disease of the stomach ; diseases of the duodenum ; enteritis ; strumous disease of the alimentary canal ; diseases of the cæcum and appendix ; diarrhœa, colitis, and dysentery ; typhoid disease of intestine ; colic ; constipation ; intussusception ; intestinal worms ; perforation ; fæcal abscess.

The *diseases of the œsophagus* are treated of minutely under the division of the causes of dysphagia, and with illustrative cases of each separate disease. Dysphagia may thus occur from cynancha tonsillaris, laryngeal disease, inflammation of the cellular tissue of the neck and mucous membrane, paralysis of the muscles, spasmodic stricture, and structural obstructions in the tube.

The organic and functional diseases of the stomach are very fully considered, the former embracing inflammation, suppuration, and ulceration of the coats of the organ and cancerous affections, and the latter the various forms of dyspepsia. The statistics of Mr. Brinton have thrown considerable light upon the organic diseases of the stomach, as perforating ulcer and cancer. According to him the former disease is twice as frequent in the female as male, while the reverse is true of cancer ; in females the perforating ulcer occurs between the ages of fourteen and thirty, but in males, between fifty and sixty. Several very interesting and instructive cases are given to illustrate the history and termination of these affections.

The *Duodenum* is subject to congestion, ulceration, mechanical obstruction, and gastric solution. But these conditions are not easily determined before death, owing to the complications which exist.

Muco-enteritis and enteritis form the subject of the next chapter, the former term applying to those cases in which the inflammation extends along the mucous membrane without involving the other coats ; the latter to those cases in which the inflammation implicates the muscular and peritoneal coats. Muco-enteritis in the child, is regarded by Dr. Habershon as infantile remittent fever, an opinion which he leaves unsupported by facts.

Strumous Disease of the Alimentary Canal, is considered under the following heads :—Diarrhœa in strumous children ; disease of the mesenteric glands ; tubercles in the peritoneum and strumous peritonitis ; disease of intestine in phthisis pulmonalis. This is one of the most practical chapters in the work, and will repay careful study.

The Diseases of the Cæcum and the Appendix Cæci, form the subject of chapter VII. These affections derive their chief importance from the great obscurity of their early symptoms, and the too often fatal termination in which they issue. The cæcum is liable to congestion, inflammation, ulceration, and perforation. The diagnosis of these conditions is rendered very obscure by the more frequent occurrence of disease of the right kidney, caries of the vertebræ, iliac abscesses, &c. For the same reason the diagnosis of perforation of the appendix vermiformis is often extremely doubtful. Much attention has recently been given to these diseases, and several valuable monographs have been published. Dr. H. has added a number of cases, some of which are of great interest.

The remaining chapters on diarrhœa, colitis and dysentery, colic, constipation, internal strangulation, carcinoma, intestinal worms, and perforation of intestine from without, abound with practical matter and a large number of cases accurately related under each head.

From the brief notice which we have given of this work, it will be seen that the author presents us with a complete treatise upon the diseases of the alimentary canal. Notwithstanding the valuable works of Budd, Chambers, and Jones, which have seemed to cover this entire ground so completely as to leave nothing to be desired, we cannot forbear to commend the volume of Dr. Habershon, as an excellent clinical guide which the practitioner will find in some respects superior to those mentioned. Especially is this true as regards the succinctness of style and subject, and the large number of accurately reported cases.

A System of Dental Surgery. By JOHN TOMES, F.R.S., Dentist to the Dental Hospital of London, and to the Middlesex Hospital. With Two Hundred Illustrations. Philadelphia: Lindsay & Blakiston. 1859. pp. 686.

A Practical Treatise on Operative Dentistry. By J. TAFT, Professor of Operative Dentistry, in the Ohio College of Dental Surgery. With Eighty Illustrations. Philadelphia: Lindsay & Blackiston. 1859. pp. 383.

THESE works, though alike devoted to Dental Surgery, are very different in their design and scope. The treatise of Mr. Tomes is a thoroughly scientific investigation of the growth and development of the teeth, and the diseases to which they are liable. Nearly half of the volume is devoted to teething, in which is considered, 1. The development of the jaws and teeth. 2. The eruption and irregularities of the temporary and permanent teeth. The remainder of the work is devoted to the diseases of the dental tissues, and gums, and their proper treatment. The first includes caries, exostosis, necrosis, absorption of permanent teeth, disease of the pulp and periosteum, hypertrophy, and necrosis of the alveolar processes; the second embraces acute and chronic inflammation of the gums, tumors, polypi, mechanical injuries of the teeth, tartar, diseases of the antrum, operation of extraction, anæsthesia, &c.

The need of a truly scientific treatise upon the physiology and pathology of the teeth, has long been felt in this country, especially by practitioners in the rural districts, who have to act the part of dentist as well as physician. The work of Mr. Tomes admirably supplies this want. It is the production of a master mind, after years of patient labor in an ample field for observation and careful investigation.

We therefore earnestly recommend the work of Mr. Tomes to the attention of the general practitioner as well as the professional dentist.

The work of Mr. Taft is especially designed for dentists. It treats of the diseases of the teeth, and of the various operations which fall within the province of the surgeon dentist, with illustrations of the different instruments employed, and methods of operating.

We cannot conclude this notice, without a word of commendation of the typographical execution of these volumes.

A Treatise on Syphilis in New-Born Children and Infants at the Breast. By P. Diday, Surgeon to the Hôpital de l'Antiquaille, Lyons. Translated by G. Whitley, M.D. The New Sydenham Society, London, 1859 ; vol. i., pp. 272.

Gooch on some of the most Important Diseases Peculiar to Women ; with other Papers. Prefatory Essay by Robert Ferguson, M.D., Physician Extraordinary to the Queen. The New Sydenham Society. London, 1859, vol. ii., pp. 235.

Memoirs on Diphtheria. From the Writings of Bretonneau, Guersant, Trousseau, Bouchut, Empis, and Daviot. Selected and translated by Robert Hunter Semple, M.D., with a Bibliographical Appendix. By John Chatto, Librarian to the Royal College of Surgeons. The New Sydenham Society, London, 1859, vol. iii., pp. 407.

The three works whose titles are above given, are the first issue of the New Sydenham Society of London. We introduce these publications in this place, not for the purpose of criticism, but to call the attention of our readers again to the object of the society. In the prospectus issued by the council, the objects of the society are thus stated :

1. The translating and editing of valuable foreign works on medical science, as also of important papers which may have recently appeared in foreign journals, transactions of societies, &c. These works, papers, &c., will be translated in full, and brought out as early as possible after their original publication.

2. The re-production of British works, lectures, and papers, which, whilst of great practical value, are out of print, or difficult to obtain, excluding the works of living authors.

3. A year-book of reports in abstract, of the progress of the different branches of medical science, compiled by a committee.

4. Should the funds prove adequate, it is proposed also to prepare volumes of medical bibliography and medical biography.

The subscription will be one guinea annually, payable in advance, equivalent to $5.25.

It will thus be seen that this society proposes to furnish a class of medical publications beyond the reach of the profession at large, and at a very liberal rate; the number of volumes annually to be issued, varying with their size. This year, five volumes are to be published. The three first volumes now distributed, are sufficient guaranty of the class of publications, which this society will furnish to its subscribers. The work of Diday is one of the most important additions yet made to the literature of Syphilis; the reprint of the writings of Gooch, one of the ablest writers on the diseases of women and children, will be welcome to all who are interested in the study of that class of affections; and finally, the collection into one volume, of the best monographs on Diphtheria from the writings of the French, will prove acceptable at this time, when the disease is so generally prevalent.

The volumes are uniformly and neatly bound.

An Introduction to Practical Pharmacy; designed as a Text-Book for the Student, and as a Guide for the Physician and Pharmaceutist; with many Formulas and Prescriptions. By Edward Parrish, Principal of the School of Practical Pharmacy, Philadelphia. Second Edition greatly enlarged and improved, with two hundred and forty-six illustrations. Philadelphia: Blanchard & Lea, 1859, pp. 720.

The first edition of this work supplied to the profession of pharmacy a much needed hand-book and guide, and was most favorably received. This edition is enlarged by the addition of nearly two hundred pages of new matter and numerous illustrations. As far as our examination extends, it comprehends every branch of pharmacy, with the most minute details, descriptions, and directions for the use of students, physicians, and practical pharmaceutists. No work of the kind, with which we are acquainted, can compare in completeness with that of Mr. Parrish.

Lectures on Surgical Pathology, Delivered at the Royal College of Surgeons of England. By James Paget, F.R.S. Second American Edition. Philadelphia: Lindsay & Blakiston, 1860, pp. 700.

There is no work to which we give a more cordial welcome, than the Lectures of Mr. Paget. They form the very basis of a correct knowledge of surgical diseases, and hence, of correct practice. We are gratified to learn that a second edition of this most excellent work is called for in this country, and trust that it will find its way to the library of every American practitioner. The present edition appears without additions.

The Use and Abuse of Tobacco. By JOHN LIZARS. Late Professor of Surgery to the Royal College of Surgeons, etc. From the eighth Edinburgh edition. Philadelphia: Lindsay and Blakiston, 1858.

Alcohol—its Place and Power. By JAMES MILLER. Professor of Surgery in the University of Edinburgh, etc. From the nineteenth Glasgow edition. Philadelphia: Lindsay & Blakiston, 1859.

THESE small volumes are designed for general reading, and embrace a popular discussion of subjects to which each refer—by two of the most eminent surgeons of Edinburgh.

In the preface to his brochure, Mr. Lizars states that the habit of smoking is greatly on the increase in Great Britain, the consumption of tobacco being in 1853, 29,737,561 pounds, or more than one pound to every man, woman, and child in the United Kingdom. The author proceeds to consider the subject under the following heads:—

1. The general charcteristics of tobacco. 2. Its use and abuse. 3. Opinions of distinguished persons.

Among the illustrative cases we notice the case of *Angina pectoris, resulting from the use of tobacco*—first published in this journal, by Dr. Corson.

The second work was written at the request of the Scottish Temperance League. Mr Miller makes the following division of his subject:—

1. Alcohol—its place as a poison; a medicine; a luxury. 2. Alcohol—its power as a poison; a medicine; as food; as a condiment; a luxury; a support in labor of the body and mind; and in enduring cold; a means of averting and producing disease; of cherishing age and prolonging life; as affecting the mind; as an instrument of vice and a special opponent to moral reformation; in clinging to its victim.

These volumes, though written for another community of readers, are especially applicable to our own country, where the use of tobacco and alcoholic liquors is rapidly becoming the great social vice.

PART THIRD.

MEDICAL RETROSPECT.

Report on the Progress of Obstetrics and the Diseases of Women; prepared for the New York Journal of Medicine. By E. Noeggerath M.D., Physician to the Canal Street (German) Dispensary.

I.—ANATOMY AND PHYSIOLOGY.

1. *Luschka, H., on the Levator Ani of the Female.—Pfeuffer's Ztschr.* 3. *Reihe V. p.* 113—121.—Dr. Luschka's article contains a minute description of the female levator ani. The origin of this muscle is in both sexes essentially the same. Those bundles which are derived from the os pubis, and which take their course along both sides of the vagina, are in connection with it by a short areolar tissue, but passing by the vagina continue until they reach to the rectum. The lower part of the levator ani is divided in two portions, of which one runs in front of the rectum, while the other portion is attached to its lateral and posterior circumference. This latter, more considerable portion is exactly like that of the male. That portion of the female levator, which is attached to the anterior surface of the rectum, is a flattened, only a few lines broad, arcuated bundle, the lowest point of which is about 1–2 ctmtr. above the orifice of the anus. It is by far less considerable than in the male, and there are no fascicles going from its median connection of both sides to the urethra, as they do in the male.

This wanting portion of the female levator ani is supplied by a muscular stratum, which surrounds the lower portion of the vagina, and being connected with the m. transvers. perin profund., it meets in front the female urethra. It is 4 Mm. broad, and situated as it is, behind the constrictor cunni, it might be properly called constr. cunni profundus.

2. Bernard, *Cl., a New Function of the Placenta,*—Clinique Europ., 3. — Dr. Bernard has previously demonstrated that the liver was a glycogenous organ, that there existed in every organic being an amyloid matter, intended to be transformed in sugar. But at the beginning of fœtal life the liver contains no sugar, and still sugar is found in the tissues and membranes of the fœtus. Therefore the question arises, where is this sugar formed. Directly from the mother it cannot be derived, because the sugar formed in the maternal liver is already decomposed,

before it comes in contact with the circulation of the uterus. The author therefore thought that the placenta was the glycogenic organ. Often repeated examinations of placentas taken from the cow did not yield a proof of this theory, while in the placentas of rabbits and dogs the sought for glycogenic matter was detected; and further researches satisfied Dr. Bernard that the glycogenic organ of cows was to be found in the plaques dispersed in the amnion. This placental liver exists before the formation of the fœtal liver, and the former disappears at the time when the latter begins to develop itself. The placental liver differs from the real placenta by its cellular structure, the latter being only a vascular organ. This organ is a white substance, situated in the placenta of rabbits and dogs, while in ruminants it is located in the amnion. In very young pigs it appears in the form of granulations dispersed over the membranes, which disappear at a later period. Under the microscope these organs appear in the shape of tufts, composed of nuclear cells. Iodine produces a reddish color, very much like the color of the glycogenic matter of the liver. It is therefore a very simple glandular organ. With the beginning activity of the liver the cells of the placental liver disappear, they being transformed into a fatty substance, which contains octædric crystals of oxalate of lime. The glycogenic matter of these plaques is obtained by boiling them with powdered charcoal and by precipitating the filtrated fluid with alcohol. The liquid obtained by boiling, does reduce the copper if diastase be added; and sugar is obtained from it by fermentation.

3. Kussmaul, *on Uterus Unicornis, with and without an Atrophied Accessory Horn.*—Verhandl. der naturh. med. Vereines Zu Heidelberg, V.—Froriep's Notizen, Bd. 1, No. 1.—Monatschrift f. geburtsk, xiv., 1, July.—Dr. Kussmaul, after giving some introductory remarks on the development and malformations of the uterus, proceeds to describe the so-called unicorn uterus. The cases belonging to this class of deformity, which have been published in periodicals or monographs, are the following: 1. By Dionis, Cours d'anatomie de l'homme, p. 309:—Ephemerid. med. phys. German. acad. nat. curios. Decur. II., A, II, p. 477.. 2. By Canestrini, Historia de utero duplici, alterutro quarto graviditatis mense rupto in Hungaria anno, 1781, in cadavere ab auctore invento., Augustæ Vindel. 1788. 3. By Fritze, Diss. sistens observ. de conceptione tubaria, etc., Argentorati, 1779. 4. By Güntz, Diss. mang. de conceptione tubaria, duabus observ. Lipsiæ nuper factis illustrata, Lips. 1831. 5. By Dreger, Journ. f. med. org. Chirurg., May, 1834, translat. in E. v. Siebold's Journ. f. Geburtsk. 1835, Bd. xv, p. 142. 6. By Ingleby, Edinb. med. a surg. jour., vol. 42, 1834, p. 350. 7. Rockitansky, Handb. d. pathol. Anatomie, 1842, Bd. III, p. 519. 8. By Tiedemaun, Meckel's Archiv, 1819, Bd. v., p. 134. 9. By Scanzoni, Verhandl. d. phys. med. Gesellschaft zu Würzburg, Bd. xiv., 1854. 10. By Behse, Diss. de graviditate in

genere et de grav. estrauter in specie, Dorpat, 1852. 11. By Ramsbotham, Practical Observations on Midwifery, with a selection of cases. Part I. 1832; Case 85, p. 407. 12. In Buffalo Med. Jour., September, 1846. 13. By Czihak, Diss. inaug. de graviditate extrauterina, Heidelberg, 1824. 14. By Heyfelder, in Schmidt's Jahrb., 1836, Bd. xi., p. 230. From these cases collected, and some personal inquiries into the subject, the author feels justified in proposing the following theses with regard to the physiological position of uterus unicornis: 1. The menstruation seems to be the same as in the ordinary formation of the womb. 2. Conception is not disturbed. 3. The developed, as well as the atrophied horn, may become pregnant. 4. Conception has been observed in the atrophied horn, in cases where there was no connecting duct with the developed horn, but very likely a channel of this kind existed before conception took place. 5. The sex of the children is not influenced, whether the ovulum comes from the right or the left ovary. 6. Twins have been observed. 7. The unicorn womb may become pregnant repeatedly. 8. The child may become fully developed. 9. The unicorn womb is not more inclined to abortion than that of natural development. 10. In most cases, an internal rupture occurs, when the accessory horn is pregnant. 11. The rupture is seated mostly near the insertion of the tube. 12. In gravidity of the accessory horn, the developed one is always hypertrophied, and endowed with a decidua. 13. The deliveries, after conception of the developed, are as easy as those occurring under ordinary circumstances. 14. The four cases of uterus unicornis, were all observed on the right side. 15. In cases of pregnancy of the accessory horn, it was six times on the left, five times on the right side. 16. Pregnancy of the accessory horn was in almost all cases mistaken for ordinary pregnancy.

4. Lenoir, *Deformities of the Pelvis, by irregular Osseus Vegetations after Fractures, and by Luxations of the Pelvic Bones.*—Archiv. Géner. Jan. et Febr.—Dr. Lenoir divides the pelvic deformities caused by fracture and luxations, into three groups: 1st, those caused by irregular development of the bones after fracture of the pelvic bones; 2nd, by traumatic, not replaced luxations of the bones in and around the pelvis; 3rd, by spontaneous luxation of the sacro-vertebral union (Kilian's spontylolysthesis). Of the first class, three observations are recorded, one published by Papavoine, in the Journal de Progrès, t. xii., under the head: case of a fatal delivery, in consequence of fractures and consequent deformity of the pelvis. The patient had received a kick from a horse, and became pregnant after the fractures were healed, the child was delivered with forceps. She died in childbed, and upon a post-mortem examination, a fracture of the right iliac bone, a fracture of the right ramus horizontalis oss. pub., and a fracture of the os ischii, near the tuber, were found; b, a case published by Rowland Gibson, in

the *Lancet* of 1856, June, page 647. The patient had been run over by a carriage, which injury resulted in an impression of the back bone, and a protrusion of the promontory towards the small pelvis ; she was delivered twice by embryotomy ; c, a case of David, published in the same journal ; the patient fell down stairs, when in the fourth month of pregnancy, and died undelivered at the full term. The sacrum was found split in four portions, two of which, united by a callus, filled the entire space of the vagina.

The second class is represented only by one anatomical preparation, No. 13, of the musée Dupuytren, the history of which, however, is not known. The head of the os femoris, and the acetabula are driven into the pelvic cavity ; the latter, and the os ilium being perforated and fractured in several places. Among the third class, the pelves described by Kilian, are mentioned, and another pelvis described by Belloc, in the Bulletin, No. 2, 8e année, 1853, under the head : Vice de conformation, grossesse, operation cæsaréenne, mort et autopsie. This pelvis belonged to a woman forty years old, who had been pregnant eight times ; most of her deliveries had been difficult, and terminated with the forceps. Only two children were born alive. After the cæsarean operation, a post-mortem operation was performed, and traces of old caries were found on the three last abdominal, and the first sacral vertebra, in consequence of which the fifth lumbar vetebra had disappeared, while the fourth touched the anterior surface of the first sacral vertebra in a right angle. The vertebral column protruded considerably towards the pelvic cavity, so that the antero-posterior diameter, measured only two and one-fourth inches.

5. Spiegelberg, O. *How is the Weight of the Trunk transmitted to the Os Sacrum.—Monatsschrift f. Geburtsk.* xiv., 1, July.—Dr. Spiegelberg defends his views with regard to the transmission of the weight of the trunk upon the os sacrum, against Dr. Freund's insinuations. The pressure of the trunk, our author remarks, which reposes on the os sacrum must be divided into two portions, one of which works and presses in a vertical line, while the other one works in a direction parallel with the inclined plane of the first sacral vertebra, thus forcing the body to slide downwards. In opposition to this Dr. Freund thinks that the pressure of the body was transmitted to the os sacrum in a backward and downward direction—*i. e.*, vertically upon the inclined surface of the named bone, which latter opinion is certainly not in harmony with mathematical laws.

II.—PREGNANCY AND PARTURITION.

1, Tilanus, C. B.—*Contributions to the Statistics of the Mechanism of Labor.—Archiv. f. d. Holländ. Beitr. I., p.* 144.—*Schmidt's Jahrb.* ciii., 7 ; July.—The very valuable article of Dr. Tilanus contains an analysis of about 5,000 births from his own observation. Out of a number of 5,357 children born, there were 5,068 cranial presentations—viz., 3,058 first, 546 second, 1,140 third, and 324 fourth presentations. Of the 1,140 third presentations, 89 remained in this position, while 1,051 were born in second presentations; the fourth presentation remained unchanged in 33 cases, while 291 were changed into first presentations. Mr. Tilanus prefers counting only 2 cranial presentations, as it is done by Smellie, Kilian, Kiwisch, Siebold, and Scanzoni, the first being the left occipito-anterior, the second, the right occipito-anterior presentation. Among these 5,357 births, 20 facial presentations were observed, the chin being directed 12 times towards the right, 8 times towards the left side. Presentations of nates (lower extremities) were observed 248 times, 170 first presentations (left side), and 78 second presentations (right side).

Finally, Dr. Tilanus offers the following table, taken from his personal observations :

Cranial presentations:—	1. occiput to the left	3,382	5,068
	2. " " right	1,686	
Facial presentations:—	1. chin to the right	12	20
	2. " " left	8	
Breech presentations:—	1. left hip in front	170	248
	2. right " "	78	
Cross presentations:—	1. right shoulder or arm in front	14	21
	2. left " " "	7	

2. *Braun, C., on the most Recent Methods of Craniotomy of the Fœtus.—Zeitschr. d. Gesllsch. d. Aezt. Zu Wien, No.* 3.—Dr. Braun's article contains a criticism of the different methods of craniotomy, among which he considers Kiwisch's method (trephining and kephalotripsis,) and that lately advocated by Cohen (perforating kephalotripsis,) as the safest and promptest means to effect delivery. Dr. Cohen's instrument was applied in two cases at the Vienna Lying-in Hospital. The first operation was very successfully performed, while in the second case the instrument proved to be deficient in its action, so that a modification in its construction seemed to be desirable.

3. Hamon, *on the Interruption of Eclampsia by the Accouchement Forcé.—Gaz. des Hôp.* 27.—Dr. Hamon's article advocates artificial delivery in cases of eclampsia appearing during pregnancy. Cases of eclampsia, unconnected with morbus Brightii, are very rarely, if ever observed in deliveries of short duration, while this accident mostly occurs in consequence and during difficult labors. The appearance of eclampsia can be prevented at times during pregnancy by therapheutical agents; if albuminuria, œdema,

headache, disturbances of sight, etc., are present, cathartics and diuretics, afterwards tonic and martial remedies may be successfully applied; if notwithstanding convulsions do appear, it is very rare to see the patient go her full term and the child be born alive. In cases of this kind it is the duty of the physician to save the mother's life by the accouchement forcé, the child being lost as a general rule. The author recollects 18 cases where the mother's life was saved by this proceeding.

The author comes to the conclusion that premature confinement ought to be induced in all these cases of eclampsia where the therapeutical means were insufficient to procure a prompt cessation of the convulsions.

4. Storer, H. R.—*Cases illustrative of Criminal Abortion.—Read before the Boston Society for Medical Observations.—Amer. Jour.*, lxxiv., N. S., April.—Dr. Storer reports the case of a lady, who when five and a half months gone with her first child, suffered from excessive toothache, which had hitherto resisted all attempts of medication, and she therefore intimated the desire to have abortion induced upon herself. The only carious tooth had been already extracted without relief, and after its removal abortion had threatened. She was ordered a fragment of pellistary root, pyrethrum, as a direct gingival stimulant, and on the second day she presented herself cured. In his further remarks, Dr. Storer expresses his strong disapproval of the practice of subjecting patients to the risk of miscarriage by the extraction of teeth during pregnancy.

In the second case reported, Dr. Storer was called to attend a lady for beginning abortion. Upon examination the outline of the os uteri was laterally and symmetrically fissured, so that the cervix presented to the touch an apparently deep and incised transverse wound completely through its substance, with irregular edges and indentations simulating artificial punctures, so that the abortion seemed to be owing to direct instrumental or other violence, which idea however was not verified by the history given by the patient. If, in any case of this kind, death should occur from some cause or other, the result at an inquest would be very dubious, and it is therefore important to remember the occurrence of such a condition of the os, which, produced by lacerations of the cervix from difficult confinements, might be easily mistaken for an artificial wound, performed with the intent to destroy the life of the fœtus.

5. Spöndli *on Multiple Births.—Monatsschrift f. Geburtsk.*, xiii., 6. June.—Dr. Spöndli reports the case of a triple birth, in which all the children presented with the head—all the children presented deformities, consisting in one of hydrocephalus, in the rest of club-feet. All of them died soon after birth. Triple births are of rare occurrence, one of them occurring in 3000 or 9000 cases. In the Vienna Lying-in Hospital 3 triple births were observed among 27000 cases during 6 years. With regard to the presentation of

triplets Naegele found the following dispositions in 14 cases: 6 times the first child presented with the head, the second with the head, the third with the nates; 3 times all the children with the head; twice the first child with the nates, the second with the head, the third with the nates; once the first with the head, the second with nates, the third with head; once the first with head, the second with shoulders, the third with head; once the first with nates, the second with head, the third with head. The article is concluded by the enumeration of several interesting cases of triple birth collected from journals, and a very uninteresting account of several twin-births.

6. Corse, *Intermittent Lochia.* (*Transactions of the College of Physicians of Philadelphia.*)—*Amer. Jr.*, lviii., N. S., April.—Dr. Corse reports the case of Mrs. J——, who on the ninth day after delivery at 9½ o'clock was seized with great pain in the lumbar region, which soon extended down the sacrum to the coccyx, and then a gush of blood took place, which continued to flow as long as the pain lasted, which was nearly an hour; it then ceased with a subsidence of the pain. The next day at the same hour, the same symptoms came on, and ran the same course. This repetition continued for two more days, when quiniæ sulfas was administered, which checked the next paroxysm entirely. Upon inquiry Dr. Corse learned that the patient had been taken with the chills about a year ago during a residence near Salem, New Jersey. She had been quite cured, however, and had not had them since.

7. Deville, *Statistic Researches on the Action of Ergot of Rye during Parturition.*—*Gaz. Hebd.* vi., 6., Feb. 11.—Dr. Deville read a paper on ergot of rye, before the Paris Academy of Medicine, in which he states his opinion that it was almost always possible to find out the cause of death of the fœtus in utero, and that all those cases, where from asphyxia death had ensued without any appreciable reason, ought to be referred to the administration of ergot. By an analysis of documents collected during the time from 1845 to 1848 in the different arrondissements of Paris, Dr. Deville arrives at the conclusion that of 515 still-born children 72, i. e. a trifling over the seventh portion had come to their death by the use of ergot. (It is very obvious at the very first glance, that this is not the right way to investigate the subject in question, because the returns to city-inspectors are of too little scientific value to serve as a basis for such minute researches as these.—E. N.) He further concludes from the above statistics, that the administration of ergot was always disastrous to fœtal life.

8. *Does the Use of Chloroform during Delivery predispose to Hemorrhages?*—*Gaz. des Hôp.*, 24.—Dr. Lion Liégard while communicating to the editor of *Gazette des Hôpitaux* two cases of hemorrhages occurring after labors in which chloroform had been administered, and for which no appreciable cause could be found out, he asks information whether he was right to believe that the

inactivity of the womb, preceding and causing these hemorrhages, was due to the influence of the drug. The editor in replying to this request, remarks—and justly so—that chloroform has no influence over the organic muscles, and that therefore chloroform had nothing to do with the hemorrhages mentioned.

III.—DISEASES OF WOMEN.

1. Scanzoni, *a Case of Spontaneous Disjunction of the Right Synchondrosis Sacro-iliaca during Labor.—Allgem. Wien. Zeitg.* No. 8.—Dr. Scanzoni reports an interesting case of disjunction of the synchondrosis sacro-iliaca. The patient, 32 years of age, entered upon her second labor on June 3d, 1858. The child presented in the first cranial position, but advanced very slowly, although the pains were very strong, and caused an almost unbearable pain in the patient's back. Finally the child was delivered; it weighed 8½ pounds, and had an unusually large and hard skull. The woman felt very much exhausted and complained of a violent pain in the neighborhood of the right incisura-iliaca, which extended along the posterior surface of the thigh as far down as to the knee, so that she was unable to change her recumbent position. At first the complaint was taken for ischias, but upon closer examination a disunion of the right ilio-sacral synchondrosis was agreed upon. On every attempt to move, the patient as well as those around her perceived a cracking sound, while an unmistakable crepitation was detected upon vaginal examination. The further development of the disease confirmed this diagnosis; an abscess formed near the right iliac synchondrosis, which was lanced on the 7th of August. A few days after this the edges of the wound closed together, the swelling disappeared, and it was easy to feel the edge of the os ilium, which protruded considerably behind the synchondrosis. The patient lamed when she left the hospital, but was healthy in every other respect.

2. Langenbeck, B., *the Extirpation of Intramural Fibroid Tumors.—Deutsche Klinik* 1.—*Schmidt's Jahrbücher B* 101, *No.* 3. *March.*—The article of Dr. Langenbeck opens with some remarks on the structure and seat of intra-uterine fibroid tumors, and he goes on to say, that all the different remedies recommended for their cure were in most instances of no avail, so that the only reliable way was the surgical operation. This has been performed, as far as our author is informed, 9 times and 3 times by Dr. Langenbeck himself. Seven instances of this number are recorded as cured. The operation is contraindicated in all those cases where the tumor is situated near the peritoneal lining. The first step of the operation is the dilatation of the uterine cavity by sponge-tents. The patient is now placed on her back, with drawn up limbs, the os externum is extended by specula, and that portion of the vaginal and cervical portion which is opposite the tumor, is incised. This being done, the index finger is introduced into the womb high enough to touch the upper border of the tumor. Hereafter the mucous lining,

as far as it covers the tumor, is incised, and removed from the latter by the finger. In some places, where this cannot be effected, a pair of curved scissors must be used. The tumor thus having been freed from its mucous lining, is pulled down by hooks, and severed from the uterine tissue by the aid of the fingers, scissors, or knives. The author reports three cases in which the operation was successfully performed.

3. Trousseau. *Treatment of Uterine Hemorrhage by large Doses of Ergot and Digitalis.—L'Union*, 36.—By numerous experiments with regard to uterine hemorrhages, Dr. Trousseau came to the following results: The ergot of rye is the safest and promptest remedy in post-partum hemorrhages, and in those following after abortion. In hemorrhages at the change of life, it is slow and uncertain in its action, while ratanhia and sulphuric acid are more reliable. In bleedings from carcinoma its effect is remarkably prompt. Dr. Trousseau does not believe in its specific styptic effects, but is inclined to attribute its anti-hemorrhagic qualities only to its action upon the muscles of the uterus. The digitalis was applied by Trousseau in doses of from 0.50 to 1 grmm. pro die in one case only, which left the question about its efficiency undecided. The remedy is principally advocated by Mr. Howship Dickinson.

4. Decaisne. *Hemorrhage during Menstruation, owing to Granulations of the mucous Membrane of the Uterus. Cure by Digitaline after Unsuccessful Abrasion and Cauterization of the Granulations.—Gaz. des Hôp.* 14.—Dr. Decaisne reports a case of successful application of digitaline in uterine hemorrhages. A hitherto healthy woman was taken with considerable flooding during every menstrual period ever since her third confinement. Among a host of remedies, sea-bathing was ordered, but all to no avail. Upon closer examination, a great quantity of fungous granulations were found upon the mucous membrane. They were duly removed and cauterized, still no impression was made upon the hemorrhage. Eight months after this treatment had been applied, Dr. Decaisne took charge of the patient, and ordered her to take pills containing each 4 mgrmm. of digitaline for eight days, at the time of menstruation, beginning with two pills, the dose to be increased to six. In a very short time the pulse came down from 90 to 80 strokes, on the second day uterine contractions were observed, which lasting up to the eighth day, lessened the hemmorhage considerably. This remedy was repeated several times, and a perfect cure effected.

5. Godefroy, *on a New Method of Replacing a Retroversio Uteri.—Gaz. des Hôp.* 54.—Dr. Godefroy has successfully applied the following proceeding in five cases of retroversio uteri occurring during the first half of pregnancy. The patient, supported by assistants, is placed above the upper edge of the bed in such a manner that the head and arms come in contact with the floor, while the anterior surface of the thighs and the legs remain on the bed. By this position, the pressure of the intestines upon the uterus is avoided, and the patient is at once prevented from coun

teracting the manipulations of the physician by muscular exertions. The redressment is effected by the pressure of 3 or 4 fingers introduced into the rectum.

6. Buhl. *The Pathological Anatomy of Puerperal Fever.—Ærztl. Intelligzbl. Bayern's. No.* 14. *Monatshrift für Gebürtsk, XIV, July.*—From an analysis of fifty post-mortem examinations, Dr. Buhl comes to the conclusion, that there is to be found a constant and characteristic sign in every case of puerperal fever, viz., a decayed, soft, dark-brown, or greyish-black offensive matter deposited on the inner surface of the womb. From an anatomical as well as a clinical view, two principal forms of the fever must be recognized: 1st, the puerperal pyæmia, 2nd, the puerperal peritonitis. In the cases observed, the puerperal pyæmia did not prove fatal before the 9th day, and very often only after three weeks. It was observed 18 times. The channel of infection are the veins. The pyæmic form is characterized by thrombi containing pus, deposited in the veins near the placental insertion, in those of the uterine walls, in those belonging to the plexus pampiniformis, or in one of the venæ spermaticæ. The so-called metastatic deposits are not needed to prove a case of pyæmia. They are comparatively rare in puerperal pyæmia. Among the 18 cases, only 1 fresh deposit was found in the lungs, and 1 in the form of a hard, caseous substance. The pleuræ exhibited frequently ecchymoses. Three times a purulent exudation was discovered in the chest, without a pyæmic infarctus of the lungs. The kidneys exhibited once pyæmic deposits, and twice very small extravasations of blood. Twice was found hypopyon, three times pus in or around the joints, once erysipelas of the nose, and twice phlegmasia alba. The spleen was of normal size (at least in the first three weeks of the disease) and contained three times yellow deposits, in one instance a deposit which was already of the caseous transformation.

The puerperal metritis was more frequent, and ended sooner fatal, than pyæmia. Three times oftener in the first than in the second week. Only two out of thirty-two cases died after 6 and 8 weeks. There was always a purulent exudation present; 18 times pus was found in the fallopian tubes, 14 times under the serous lining of the womb, especially in the neighborhood of the neck, but equally in the lumbar glands and in the sub-serous cellular tissue. The peritonitis may be divided ætiologically and anatomically into two forms: 1st, cases of peritonitis, by transmission of the virus through the tubes; 2d, cases where the infecting matter from the inside of the womb was taken up by the lymphatics (formation of purulent thrombi in these vessels), which transmitted to the serous lining of the abdomen, produces peritonitis. This latter form is the most violent and disastrous of the two, and is generally observed during epidemics. In pyæmia and peritonitis, the following was found: 1st, an almost constant swelling and œdematous condition of the retroperitoneal, inguinal and often of the mesenterial glands. 2d, osteophytic growths on the inner surface of the skull. 3d, in several cases a swelling of the cortical portion of the kidneys, and microscopical signs of acute Bright's disease. Cases without anatomical alterations were not observed, while in some they were very little intense.

Report on the Progress of Infantile Pathology and Therapeutics. Prepared for the New York Journal of Medicine, by A. Jacobi, M.D., Physician to the Children's Department of the German Dispensary.

I.—GENERAL PATHOLOGY.

Robert Küttner, M.D., *On the Influence of Sex in Diseases of Children.* Journal für Kinderkrankheiten, 1859, 1, 2.

Dr. Robert Küttner, of Dresden, proves by accurate statistical reports, that long before the complete development of the sexual organs, even in the earliest infancy, diseases depend much on sexual difference. The results of his comparative examinations of ten thousand cases of infantile diseases, are the following: 1. Boys, particularly in the first year, suffer more from inappropriate food and diseases of the digestive organs than girls of the same age, and a greater number of boys will perish in consequence of such diseases; the relative mortality being about the same in either sex. 2. Diseases of the brain and the nervous system in general, are twice as frequent in males as in females, particularly in and after the fifth year of life. 3. Umbilical and inguinal herniæ are more frequent in males than in females. 4. Diseases of the respiratory organs are more frequent in females after the third, and even more so after the fifth year. A larger number of such diseases prove fatal in females. 5. The same observation is made in organic diseases of the heart. 6. Acute diseases of the blood exhibit no perceptible difference as to sex, but chronic anæmia and scurvy-like decomposition of the blood is more frequent in females than in males, especially after the eighth year. At this age the proportion of thus diseased females to males, is 10 to 1. Scrofula and tubercles show no particular difference in the first years, but after the fifth year of life tubercles in the lungs are found more frequently in females. The number of cases of rhachitis is pretty equal in the two sexes, but it is often developed at a later period, and is apt to last longer in females than in males. 7. Chronic diseases of the skin, particularly eruptions of the scalp, are more frequent in females than in males after the ninth year. 8. The same is found to be the case in tumors of the thymus gland.

II.—TOXÆMIC DISEASES.

1. D. Wooster, M.D., *An Essay on Diphtheria, with cases.* San Francisco, 1859; pp. 27.

2. Edward Copeman, M.D. *An Essay on the History, Pathology, and Treatment of Diphtheria.* Norwich, 1859 ; pp. 47.
3. Ernest Hart, *On Diphtheria : Its History, Progress, Symptoms Treatment and Prevention* (Reprinted from the *Lancet*). London, 1859 ; pp. 36.
4. Scoutetten, M.D., *On the Prevention of Accidents consequent on Measles and Scarlatina.* Gaz. Hebdomadaire, 1859 ; No. 13.
5. B. Arnold, M.D., *On Renal Affections accompanying Scarlatina.* Memorabilien aus der Praxis, 1859 ; iv. 3.

5. Anizon, M.D., *On the effect of Sulphate of Quinine in Albuminuria following Scarlatina.* Gaz. Hebd., 1859 ; No. 7.

I.—Dr. D. Wooster of San Francisco, has published a very elaborate essay on Diphtheria, containing almost everything note-worthy that has appeared since Bretonneau, in French, English, and American literature on this subject. The work is for the most part not original, being a digest of what has been written before, but will prove highly instructive from the variety and accurate selection of its contents. The main results the author arrives at, from both his literary studies and the cases observed and described by himself, are the following :

1. Diphtheria is a specific disease.

2. It is distinguished from scarlatina by the absence of eruption ; from grangrenous sore throat, by the absence of ulceration and sloughing ; from croup, by the aplastic nature of the exudation.

3. Diphtheria may properly be divided into two varieties, the mild and the severe.

4. The mild is seldom fatal ; slight or no difficulty of deglutition, little fever, no engorgement of cervical glands, neither coryza, nor lachrymation, but presenting the positive diagnostic sign of aplastic exudation on the tonsil, palate or pharynx.

5. The severe is recognized by the diagnostic aplastic false membrane, high fever at first, coryza, lachrymation, engorged glands about the jaw, difficult deglutition, difficult utterance, or complete aphonia, great diminution of animal power, cyanosis, vomiting towards the close of the affection, and intense gangrenous fœtor from the decomposition of the exudation.

6. Diphtheria is contagious.

7. The simple form is easily controlled by treatment which is the same as for the severe form, modified according to the comparative urgency of the case.

8. The severe form is with difficulty controlled, and the prognosis is always extremely unfavorable, even at the beginning.

In regard to treatment, we do not fully agree with the author, nor are we inclined to submit to every one of the above aphorisms, as for instance, No. 2. The local treatment has certainly to consist of such applications as will destroy the false membranes, as hydrochloric acid, nitrate of silver, alkalies, and we add, more than any other alkalies, chlorate of potassa and soda. Our own experiments instituted according to Barthez and some other French writers, prove that no alkali is more powerful in dissolving false membranes than the chlorate of soda, and next to it, chlorate of potassa. The internal treatment of the author consists in administering an emetic in the beginning, and quinine as a tonic afterwards. He insists upon ablation of the tonsils, considers tracheotomy advisable when other means fail to relieve the cyanosis, and believes chlorate of potassa harmless, but of unproved efficiency in diphtheria. Emetics may sometimes be indicated by the state of the stomach, and then, but only then its administration may be permitted, for it must not be forgotten, that the beginning of diphtheria will not once in a thousand cases exhibit a mass of false membranes that require an emetic for their removal. And it is equally true, that the majority of fatal cases perish from decomposition of the blood, and not from suffocation. Therefore the main indication during the course of the disease is to prevent the decomposition of the blood and the accompanying fever ; and the main remedies will be quinine in antifebrile large doses, acids (dil. mur. ac.), and chlorate of potassa, which we, after a very extensive experience, consider equally important in both its internal and external use. That the ablation of the tonsils is of no use in cases which exhibit no symptoms of suffocation, we need not say, but certainly this operation must be considered as worse than superfluous, inasmuch as it is well known that the sore surface will at once be covered by a new formed diphtheric membrane. Tracheotomy will seldom be thought of, as death from diphtheric croup, following the pharyngeal diphtheria, is less frequent than from dissolution of the blood. We must add, that we have seen temporary relief following tracheotomy in very severe cases of diphtheria proceeding downwards into the respiratory organs, but we have never been so fortunate as to see a single case that finally recovered after the thorough decomposition of the blood pervades the whole system. Finally, we add that we attribute a great number of recoveries to the constant use of the tincture of muriate of iron, to which our author slightly alludes ; we administer it in every severe case, to remove the consecutive anæmia, and to secure a final and entire recovery.

II.—Dr. Copeman's essay is, in a great part, a recapitulation of Bretonneau's, and Rilliet's and Barthez's general principles, the author frankly stating that most of what he had stated " is based upon the authority of other writers ; and that it would be premature to speak very much or strongly upon personal experience of the treatment of an affection which has not yet been amongst us a sufficient length of time to make the practice of individuals of much general or decided value." The author, however, is a thinking physician ; he distinguishes well between the sporadic and epidemic character of the disease, takes in regard as well the locality as the form of diphtheria, and the character of the fever. But his weak point is undoubtedly therapeutics and its indications. We are decidedly of opinion that even mild forms of diphtheria go hand-in-hand with (slight though it be) decomposition of the blood; and therefore we positively protest against both bleeding and calomel so frequently administered by the author. Generally the author seems to have seen more cases of the pseudomembranes progressing downwards into the larynx and trachea, than such as result in a speedy death without almost any remarkable symptoms. Thus only can we explain the fact that local affections are always more regarded than general symptoms, which, combined with the adynamic fever, will be prominent in the majority of severe cases.

III.—The opinion of Dr. Hart, whose careful and able report was first published in the London *Lancet*, will be learned best from the following concluding propositions as given by himself:

1. Diphtheria is a specific disease. This is seen in its origin, march, and mode of extension; in the character of its exudation; in its local manifestations; in its seats of predilection; in its toxic influence; in its prodromata, its manner of termination, and its sequences.

2. It is often confounded with scarlatinal angina, and with gangrenous cynanche.

3. It is propagated by infection and by contagion. It is both epidemic and sporadic in its manner of invasion, and is remarkable for the severity with which it is developed in limited centres of population.

4. Diphtheric angina presents three varieties, which may be designated—*First*, simple diphtheric angina. *Second*, croupal diphtheric angina. *Third*, malignant diphtheric angina. The prognosis of the first is favorable, of the second unfavorable, and of the third most unfavorable.

5. The treatment should include the local application of a solution of nitrate of silver, Beaufoy's concentrated solution of chloride of sodium, or hydrochloric acid, according to the circumstances. The internal remedies most useful are, emetics in the early stage of croupal diphtheria, and the tincture of sesquichloride of iron, with chlorate of potash.

6. Tracheotomy should be resorted to in the second or third stage of croupal diphtheria; leeching, blistering, and bleeding should always be avoided.

7. The means of prevention, besides careful hygienic measures, as ventilation, etc., must always include the daily examination of the throat where the epidemic type presides, and the isolation of the patients.

IV.—Dr. Scoutetten repeats his views on the prevention of the dangers consequent on measles and scarlatina, published as early as 1838. In the commencement of desquamation he applies oil to the whole surface of the body, keeps the patient in bed, and orders a bath the next day, to be followed by another embrocation. The number of embrocations depends on the severity of the disease: the author, however, seldom found more than four embrocations and two baths necessary. Thus Dr. S. is the first to introduce into French literature oily embrocations in cases of acute exanthems, without, however, knowing that a good while before his days, C. Fr. Dähne (1812) and Schneemann (1848) have strongly recommended oil or lard to be applied externally in such cases, especially in scarlet fever.

V.—Dr. B. Arnold examined the urine of seventeen patients suffering from scarlatina, which was not followed by any dropsical symptoms in the stages of eruption and desquamation. He found albumen (more or less) and epithelia in thirteen; albumen, fibrinous casts, and blood corpuscles in one; no albumen, no fibrinous casts, and no blood in three. Of seven cases where the urine was examined during the consecutive dropsy, albumen and epithelia were found in two; albumen, fibrinous casts, and blood corpuscles in five. From these facts Dr. A. arrives at the conclusions, that different forms of renal troubles are met with in scarlatina, and that even in the early stage of eruption the kidneys may be found diseased. The renal affection in this early stage will sometimes show itself as a mere hyperæmia, as a catarrh of the canaliculi uriniferi (Johnston's and Todd's "nephritis desquamativa") and even disappear by itself, but it may progress to such an extent as to form the croupal and parenchymatous inflammation of the kidneys.

VI.—Dr. Anizon urges the fact, that not the blood, but the tubuli uriniferi are the seat of disease in albuminuria consequent upon scarlatina. The therapeutic indication, if any, is therefore to modify the inner surface of the tubuli, and the remedies must be looked for amongst those agents that will be eliminated by the urine. The sulphate of quinine being one of them, the author thinks it most apt to prevent the expulsion of the epithelia and the transudation of albumen from the blood. He succeeded in curing albuminuria in three cases, by administering from 5 to 10 grains of sulph. chin. daily for a number of days.

III.—RESPIRATORY ORGANS.

1. E. Schottin, M.D., *On Asthma Thymicum.*—Archiv für Physiologische Heilkunde 1859. III. p. 305.
2. Clar, M.D., Prof., *Observations on Anomalies of the Thymus.*—Jahrbuch für Kinderheilkunde und physische Erziehung. 1859. II. 3.
3. Reymann, M.D., *Pemphigus connatus, with a Lung Test.*—Preussische Vereins-Zeitung. 1859. II. 13.

I.—Dr. Ed. Schottin arrived at the conclusion, from three cases accurately described, that the thymus gland *may* produce a spasmodic affection of the glottis, whenever the head and isthmus of the gland reach as far down as into the incisura semilunaris manubrii. All the three children suffering from laryngismus were large, well developed and fat, without apparent hypertrophy of the thymus. The paroxysms did not appear before the sixth month, were not strong in the beginning, and were observed during the sleep of the patients only. Gradually the attacks increased in force to such an extent as to be produced by swallowing. Supination readily brought them on, and the veins of the neck appeared always to be swelled. The attacks became rarer and less dangerous by scarce diet and the internal use of iodide of potassium. The common results of all the post-mortem examinations were the following: The thymus was hypertrophied in all its parts; the structure of the inferior lobes normal. In the head and part of the isthmus situated in the aditus juguli the tissue in regressive metamorphosis, and firmer, paler, and capable of exercising a pressure on the bloodvessels. The larger veins of the neck were dilated, and the cellular tissue in the neurilema of the vagus nerve was of unequal thickness and density. As the thymus gland was not large enough to be rightly called hypertrophied, and as there is a number of cases, in which the gland has been found to extend far below the manubrium sterni without producing spasmodic affections, the author is not of the opinion that the position of the head and isthmus in the aditus juguli alone must necessarily bring on reflex paroxysms by pressure on the vagus nerve or on bloodvessels. But he considers the cause of such a pressure, with its consequences, to be found in the occasional thickening of the head and isthmus of the thymus gland. After all, Dr. Sch. acknowledges the thymic asthma to have a real existence and to be produced by the thymus thickened and perhaps altered in its structure; thereby exercising a pressure on the vagus nerve either directly or by the consecutive dilatation and swelling of the veins of the neck.

II.—From a series of eight cases Prof. Clar draws the following conclusions:

1. There is a dyspnœa referable to congenital hypertrophy of the thymus. This dyspnœa may degenerate into real suffocatory spasms, whenever the hypertrophied thymus is either occasionally swelled or complicated with pulmonary catarrh.

2. Therapeutical indications are given for the use of emetics, antispasmodics, cold lotions, derivating and antispasmodic injections, iodide of potassium externally and internally.

3. Hypertrophy of the thymus is a very dangerous complication in croup, because of the double danger from cerebral and pulmonary œdema; tracheotomy performed in such a case would prove unsuccessful.

4. In some sudden cases of death, swelling or hypertrophy of the thymus, combined with pulmonary œdema, are the only traceable causes of death.

5. Hypertrophy of the thymus may just as well give rise to

hyperæmia, as to œdema of the brain and lungs. Both of these anomalies may produce a sudden death.

6. The prognosis of pulmonary and bronchial catarrh becomes most unfavorable by the complication with a hypertrophied state of the thymus gland.

7. Congenital diseases of the heart and hypertrophy of the thymus gland are no less a very dangerous complication, particularly so on their combination with catarrh of the respiratory organs.

8. Heteroplastic deposits into the thymus glands are probably not found unless similar deposits are, at the same time, observed in other organs.

III.—Dr. Reymann reports the case of a woman who was delivered, in the eighth month of her pregnancy, of a child apparently living, breathing though incompletely, moving its limbs but not crying. Thus it remained half an hour. The whole surface of the body was covered with vesicles half an inch in diameter, the epidermis of which was easily lifted and removed. The lungs were of a pale red color, filled the whole thoracic cavity and covered the pericardium ; when taken out and placed in water together with the heart and the thymus gland, they sank. In the same manner the lungs separated from the heart and thymus, even single parts of the lungs, did not swim, nor did gas escape. The pulmonary substance was compact, as it were hepatized. Certainly the symptoms of life observed in this case were so slight, and the respiratory action so little, as not to fill the lungs sufficiently with air. The general assumption, that actual life is to be excluded whenever the lungs will sink in water as in their fœtal state, will hardly be shaken by a case like this.

IV.—ORGANS OF DIGESTION.

1. Robert Wertheimber, M.D., *On Angina Pharyngea Œdematosa in the Infantile Age.—Journal für Kinderkrankheiten,* 1859. 1 & 2.
2. Hermann Schwartze, M.D., *Pathologico-Anatomical Description of Cholera Infantum.*—Ibid., 5 & 6.

I.—Dr. R. Wertheimber publishes, under the name of angina pharyngea œdematosa, four cases of serous infiltration of the submucous tissue of the pharynx, produced by an inflammatory process. The cases were observed in either spring or fall, during cold, foggy weather, in children with pale skin, flaccid muscles, and with anomalies in the development of the osseous system. Difficult breathing, want of appetite, and constant rhonchi in the throat were the first symptoms. A large quantity of colorless and slightly consistent mucus was found to adhere to the mucous membrane, and even to fill the isthmus faucium. Velum palatinum and uvula were, after the mucus was removed, found to be considerably swelled ; the uvula particularly appeared thickened, soft and much elongated ; the tonsils, too, appeared large in their circumference and loose in their structure. The mucous membrane of all these parts was pale, but partially injected with blood in the capillaries, and felt soft, moist, and viscid to the touch. The temperature of mouth and pharyngeal cavity proved normal. The difficulty of respiration was proved to exist by the acceleration of breathing, by the sympathetic movement of the nostrils during inspiration, and by the anxious expression of the face and restlessness. Respiration was noisy, with loud expiratory snoring, the voice "veiled," but neither hoarse nor suffocated. The voice became clearer, and respiration less difficult after the mucus was removed. Both swallowing and sucking were difficult. The disease was sometimes acute, sometimes chronic ; prognosis is generally favorable, as some cases will recover without any therapeutical means. Emetics once or repeatedly administered, and slight diaphoretics have a favorable effect, and local derivants, as sinapisms applied to the neck, will prove useful. Whenever a case shows a tendency to become chronic, the parts ought to be sponged with a solution of nitrate of silver in water (gr. x. to f. ℥i.). One single case recovered after the internal use of small doses of iodide of potassium.

II.—Dr. Schwartze publishes the following results of forty post-mortem examinations made on children who perished from intense gastro-intestinal catarrh, and consecutive cerebral symptoms, a disease generally called cholera infantum. All these children died in the first four months of their life. The emaciation of the body was considerable, fat and muscles were greatly diminished in volume, skin pale, face and extremities cyanotic. The cerebral meninges were always hyperæmic; in some cases there were extravasations, the choroid plexus hyperæmic, sometimes dark red, and all its veins greatly dilated and blocked up with cruor ; the sinus duræ matris stuffed with blood, sometimes liquid, but usually coagulated, cruor and fibrinous lumps being mixed. Thromboses were mostly found in the sinus transversus, and in sin. long. inf., sometimes the coagulation was as large as to extend from the confluens sinuum to the jugular foramen ; in one single case, the obliteration was found in all the veins of the brain. The arachnoid membrane and pia mater, were seldom infiltrated with serum ; yellowish purulent infiltration was found in a single instance. Below the membranes, between the gyri, a slight serous exudation was generally found. Venous hyperæmia was no less visible in the medullar substance of the brain, rarely in the cortical substance. This latter is usually anæmic, of a yellowish color, while the former is pink, with clearly perceptible bloodvessels, from whose openings dark bloodpoints are seen arising. The consistency of the cerebral substance is but little, it is soft and pulpous. The ventricles are void ; in two cases the ependyma was thickened. Extravasations were sometimes found extensive ; encephalo-hemorrhagia, once, and real softening of a part of the medullar substance of the large hemispheres, once. The jugular veins are usually full of blood, sometimes not equally so on either side. In twelve cases out of forty, muguet was met with, and similar deposits in trachea and larynx also. The mucous membrane of the bronchia, was always injected with blood, sometimes more, sometimes less. In the lungs, some particles were atelectatic, beside lobular pneumonic infiltrations and indurations, and local hemorrhages ; the posterior part of the inferior lobes mostly hypostatic, the superior lobes frequently œdematous or emphysematous. Pulmonary hemorrhages are explained by the diminution of the energy of the heart, and the retention of the blood in the pulmonary tissue ; many pneumonic indurations may originate from emboli introduced by cerebral thromboses. The left ventricle was contracted, usually void ; in the right ventricle there was a little blood, usually very liquid, very seldom coagulated cruor, and but exceptionally fibrinous coagulations ; in some cases terminating very rapidly, there were some solid coagulations in the left ventricle also. At the margins of the mitral and tricuspidal valves gelatinous thickening was found, with small extravasations. The liver was found in almost every condition as to the amount of blood contained therein ; its consistency was sometimes firm and solid, sometimes there was fatty degeneration ; in one case it was icteric and very hyperæmic. The amount of blood in the spleen was equally variable ; it was generally hard and fragile. The kidneys were mostly anæmic ; in four cases only where thrombosis of the renal vein was found, it was hyperæmic. Infarcts of uric acid were observed thirteen times ; they are the more frequent the smaller the amount of water is in the blood. The mucous membrane of the stomach is injected with blood, its membranes sometimes softened ; its contents are usually acid. The intestinal canal shows not always the same seat, nor the same form of disease ; swelling of the solitary follicles and the mesenteric glands, is most constant. The catarrh is most prominent sometimes in the colon, sometimes in the jejunum and ileum, sometimes in all of them alike. Sometimes hyperæmia and anæmia are alternating. Sometimes ecchymosis and extravasated blood is met with ; sometimes, though rarely, a greyish discoloration of the mucous membrane. The follicles appear considerably swelled and reddened, and will sometimes burst. The mesenteric glands, which are usually increased in size, are in their interior either white and solid, or greyish and infiltrated with serum, or hyperæmic, particularly in their cortical part. Much gas is contained in the intestines, besides there are copious serous or mucous fæces, of an intensely sour smell. After all the main characteristic of the disease is found in the rapid diminution of serum in the blood, whereof troubles of the circulation of the blood, particularly in the brain and lungs, are the necessary consequences. Thus the rapid deaths of the little patients are easily explained, the more so in such cases where thromboses are brought on by the interruption of the circulation in the veins.

V.—NERVOUS SYSTEM.

1. H. Kœhler, M.D., *Cases of Opisthotonus depending on Spinal Disease in Children Suffering from Hydrocephalus.*—Journal für Kinderkrankheiten, 1859, 5 & 6.

Dr. H. Kœhler asserts to have often found in cases of hydrocephalus, the oblongated spine and its meninges, even the cervical and dorsal portion of the spine in a diseased condition. The alterations met with in the brain could many times be shown to exist contemporaneously in the spine, and congestions to the membranes of the medulla oblongata were present in almost every case. From this he concludes that it is wrong to attribute the convulsions and spasms observed in hydrocephalic children to cerebral irritation only, but that they may just as well be considered as symptoms of the coincident spinal affection.

PRACTICAL MEDICINE.

Chorea treated by Sulphate of Zinc.—Mr. W. H. Stone, of St. Thomas' Hospital, gives the following statistics of cases of Chorea :—Of 16 cases treated with sulphate of zinc, 13 went out cured, 3 relieved ; but 2 of the latter were in a fair way of recovery, and may probably be set to the credit of the medicament. On the other hand, three of those ultimately cured, owed their improvement, partly to ferruginous preparations ; and in one case the zinc had no effect whatever. It may, then, be stated generally, that advantage was derived from the zinc in 14 out of 16 cases. The longest stay in the Hospital among these cases was 123 days ; the shortest 14 ; the average stay, 44.6 days.

Fourteen cases were treated during the same period with preparations of iron ; all were cured. The longest stay in Hospital was 161 days ; the shortest 6 days ; average stay, 44.2 days.

Twenty cases were treated with liq. potassæ arsenitis :—18 cured ; 1 relieved ; 1 died. The longest stay in Hospital was 55 days ; the shortest 6 ; average stay, 26.3 days. Average stay in Hospital of the 50 cases submitted to the three principal remedies, 37.2 days ; average stay of all the 54 cases, 35.4 days.

The results of this analysis are somewhat remarkable, as failing to confirm the usual estimate of the value of sulphate of zinc in this disorder. The iron seems to act more certainly, and the arsenic both more certainly and more rapidly than the zinc. The average duration of treatment both with iron and zinc, 44.2 days and 44.6 days respectively is very similar, and both are above the general average of the whole number of cases, namely, 35.4 days; whereas the average stay of the arsenic cases falls as low as 26.3 days. This difference is the more remarkable, as the character of the cases submitted to the arsenical treatment rather exceeded in severity that of the others; and, indeed, the only death recorded belonged to this division.

On the Effect of long-continued Doses of Iodine. By M. RILLIET. —M. Rilliet, of Geneva, relates some cases to the Paris *Académie* in proof that iodine, although administered in small doses, if continued for too long a period, may gradually induce very serious symptoms, the origin of which may not always be obvious. He concludes:—1. The prolonged absorption of an iodized salt, whether contained in water, the air, or in food, is not always without danger. 2. The inhabitants of some localities are more exposed to this influence than others; and such susceptibility may be due to the minute quantity of iodine contained in the air, water, or food, employed in such localities. 3. This iodic intoxication is perhaps more to be feared when the medicine is given in small than in large quantities, as a preventative rather than as a curative agent in a localized and confirmed diathesis. 4. It is a very exceptional occurrence in childhood, rare in adult age, and more to be feared as the subjects advance in life. Therefore the administration of iodine to persons older than 40, must be especially watched, and it must be suspended on the appearance of the first symptoms of saturation, as bulimia, emaciation, palpitation of the heart, or nervous susceptibility. 5. The best remedies in this kind of slow poisoning are milk, restoratives, change of air, and iron.—*Bulletin de l'Académie*, and *Med. Times and Gaz.*

SURGERY.

Thirty-five cases of amputation of penis for Epithelial Cancer. Med. Times and Gaz.—Amputation of the penis is not, under ordinary circumstances, an operation attended by any material risk to life. Of the thirty-five cases given above, all, excepting two, resulted in recovery, and in one of the latter the fatal event was in no way connected with the operation, and did not occur until three months after it. In the only one in which death *bona fide* resulted from the operation, it was caused by a low form of pneumonia which supervened in the fourth week. The patient had previously been a healthy man. Such results will, of course, occasionally follow all operations, even the most trivial, especially when performed in the wards of Hospitals where erysipelas, pyæmia, etc. are often rife. The risk attending amputations of the penis is probably increased slightly in proportion as the advanced stage of the disease requires that it be performed low down. When, as we have seen in one or two instances, it is required to dissect away the crura of the organ from their attachment to the bone, the danger attending it may even become considerable. In none of the cases in our present series, however, was so extensive a dissection required, and a majority of them were amputations not much below the glans.

Age most liable to Cancer of the Penis.—The age of the patient is stated in only 23 out of our cases. The oldest in the series was 77, the youngest 27. To classify them according to age,—we find one under 30, four between 30 and 40, eight between 40 and 50, four between 50 and 60, five between 60 and 70, and one between 70 and 80. Thus it would appear that middle age is the period of life most liable to this form of cancer, a circumstance to which probably several influences contribute.

Exciting Causes of Cancer of the Penis.—It has long been a matter of observation among Surgeons that congenital phymosis often acts as a localizing or exciting cause of cancer of the glans. The disease is exceedingly rare in Jews. In only four of the cases in our series do the notes state that this condition of the prepuce had existed ; but it must be borne in mind that no special attention was given to the reporting of the previous history of the case by those who have supplied to us the data we have used. The object alone in view was the result of the operation: Thus it is highly probable that a far larger proportion were really the subjects of phymosis. In one case it is stated that a long-standing venereal sore had preceded the malignant one, and in another, the cancerous ulceration attacked a cicatrix left by a wound in infancy.

Forms of Cancer to which the Testis is liable—Of the above thirty-six cases it would appear that in almost the whole the form of cancer was the soft form of medullary. In several the structure of the diseased mass was firmer than that of a typical medullary growth, but in none did it approach that of true scirrhus. Modern histological investigations have indeed tended to show that true scirrhus, such as that so commonly seen in the mammary gland, for instance, is never met with in the testis. The supposed instances of it described by Sir Astley Cooper, and other writers, have proved on microscopic examination to be not cancer but cartilage. It is quite possible also that examples of syphilitic sarcocele, with an unusual degree of induration, may occasionally have been regarded as scirrhus.

Age most liable to Malignant Disease of the Testis.—It would appear that all periods of life, excepting the senile, and including even those of infancy, are liable to the occurrence of malignant disease of the testicle. In the youngest patient in our list it began at the age of one year and eight months, whilst the oldest was 59. Taking the decennial periods, we have three instances of the disease occurring between the first and tenth years, one between 10 and 20, eight between 20 and 30, thirteen between 30 and 40, six between 40 and 50, and five between 50 and 60. The age stated in each case is that at which the patient came under Surgical treatment for his disease, and the age at which the latter had first commenced was most probably about a year younger. Bearing this fact in mind, we can have no hesitation in accepting the conclusion, that the first half of adult life (from 20 to 40) is the period in which the testis is most liable to be attacked by medullary cancer.

Usual rate of progress of Cancer of the Testis.—Malignant disease of the testicle has often been taken, and very properly so, as a typical example of cancer. It is acute in its onset, and very rapid in all its stages of progress. The facts recorded in the above series fully bear out these statements, and the inference is of great importance in its practical aspects.

CORRESPONDENCE.

On the Effect of Pressure upon Ulcerated Vertebræ, and in Morbus Coxarius, and the Relief afforded by Mechanical Remedies, with Cases. By H. G. Davis, M.D.—In giving a history of cases, with the design of illustrating the efficiency of any specific mode of treatment, it is due the profession that at least a portion of them should embrace the more difficult forms of the disease, in order that a correct judgment may be formed as to the power or applicability of the remedial agent. Medicines that would control a disease, when present in a mild form, might be totally inadequate to meet the urgency of a more malignant type. What is true of articles of the Materia Medica, is equally so of mechanical contrivances when used as remedial agents. A given principle, or an apparatus constructed upon it, may be applicable to Potts' disease, when located in a particular portion of the spinal column, yet worthless, or positively injurious, when applied for disease in some other part. Apparatus that might be quite successful if the lumbar or lower dorsal vertebræ were the seat of the difficulty, where the tendency to deformity is comparatively slight, might fail entirely, were the disease located in the upper dorsal or cervical, where the tendency to deformity is very great. In fact, most of the apparatus in use for the treatment of Potts' disease has no application when the disease occurs above the middle of the dorsal vertebræ. Most of them indeed cannot rightly be termed apparatus for treating Potts' disease—as they are applicable only to a limited number of cases—and it is not unreasonable to infer, that even in these they cannot be as efficacious as an apparatus, the principle of which is so broad and universal as to be equally as well suited to the worst forms and the most difficult situations, as to the milder forms and more favorable localities. The adaptation of one is partial, while that of the other is universal. An apparatus that can remove the deformity in a patient, arising from lateral curvature that had existed for some years, and then followed by Potts' disease in the middle dorsal vertebræ, the former producing the ordinary lateral deformity resembling the letter S, while the latter gives rise to the angular or humpback of Potts' disease, must be much more efficient in all cases, than one that is only applicable to one of these distortions; yet an apparatus might be somewhat efficient in such a case, and not be in any way applicable to Potts' disease, or lateral curvature affecting the cervical region. In Potts' disease, that apparatus which most effectually enables the patient to rest upon the lateral processes of the vertebræ the weight of that portion of the body above the one diseased, while at the same time it does not interfere with the motions of the trunk, or with the free and full expansion of the chest, is the best adapted, not only to prevent deformity, but to put the patient in the best possible condition (so far as mechanical support can do it) for arresting the disease and promoting a rapid recovery. The best remedial measures in addition, are those which give the system the greatest amount of recuperative energy.

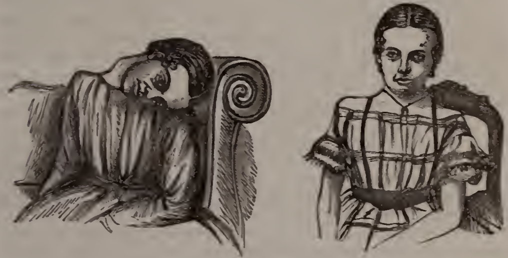
As disease of the cervical vertebræ is of rare occurrence, I will give the history of an interesting case showing the efficiency of my apparatus in treating the disease in this locality. March 10th, 1858, was called in consultation with Dr. Dewees of this city, to see the daughter of Mrs. D., aged 14. When seven years old, she had Potts' disease of the lower lumbar vertebræ destroying its body and allowing the one above to tilt forwards upon its lateral processes, thus producing an incurvation of the spine, so great as to compel her to throw back her shoulders to support the centre of gravity ; this position of the shoulders renders the spine straight from the lumbar to the third cervical vertebræ, the seat of the second attack of the disease.

In the winter of 1856-7 she returned from boarding school, where she had been kept upon a light diet, complaining of pain in her neck, and her general health enfeebled. For some months she had experienced unpleasant sensations in her neck, sometimes amounting to pain whenever she leaned her head forward for any length of time.

Dr. Valentine Mott was immediately called, and she remained under his care until a short time previous to my being consulted. At this time there was almost entire paralysis of the body, the lower limbs contracted, the arms could be moved with a swinging motion, the hands unable to hold anything, and with but partial control of the sphincters of the body ; the appetite precarious, and the body much emaciated. The head was resting upon the left shoulder with the face looking downward and to the right side, from which position she was unable to raise it.

That portion of the neck below the seat of the disease retained its natural position, while that above, together with the head, were at nearly right angles with it. It would seem impossible with such a displacement of the parts, that the spinal cord should escape serious lesion, yet the sequel proved that it was uninjured.

With this position of the parts, it was with some anxiety that the attempt was made to restore the head to its natural position, fearing that in some way the functions of the spinal cord might be destroyed. Extension was first made with the hands, considering this mode safer and more immediately under my control than any apparatus, should unfavorable symptoms manifest themselves. Perceiving no evil effects from extension, I applied my apparatus for Potts' disease with the part for sustaining the head. By this means the head was brought quite erect, and as the sustaining medium is elastic, it continued to act by fatiguing the muscles and extending the soft parts that confined the head in its malposition until the latter assumed its natural position ; here it was kept until there was sufficient deposit of bone or other substance to enable her to dispense with the apparatus.



[Photographed on Wood, from Daguerreotypes.]

During the treatment the apparatus allowed the full exercise of all the muscles connected with the head and neck, so far as could be permitted without displacement or injury to the parts.

In six months she was able to dispense with all artificial support, the head and neck performing all of their motions freely and naturally, with the exception of a little stiffness in arching the neck when attempting to throw the head forward and downwards. There remains some thickening about the locality of the lesion, much of which would have been avoided had the treatment been entered upon at an earlier period of the disease.

Judging from the rapidity of her recovery after the application of the apparatus, it is probable, had all pressure been removed at first, she would have been restored without any mark indicating the locality of the disease ; and I would urge upon the profession the necessity of removing the pressure at once. In most cases, if this is done early, the inflammation will subside before ulceration takes place; or, if it has, it will be checked, and restoration and recovery soon follow.

Pressure will continue the ulcerative process, when it would stop were the pressure removed. After childhood, restoration will almost invariably commence as soon as the parts are separated; before this period, it is more uncertain, as the earlier the disease manifests itself, the greater is the constitutional tendency and the probability of its not stopping until the entire body of one vertebræ is destroyed, and in very bad constitutions it may extend to others.

Pressure upon an ulcerated vertebræ produces a general disturbance of the system, independent of any discharge from the parts, or from any pressure upon the spinal cord. For the lack of a better term, it is called irritation; that it is not from the direct effect of the disease upon the spinal cord, is evident, from the fact that the same symptoms are present when the ulceration is in the hip joint. That pressure is the principal, if not the only cause of the irritation, is clear; for if we relieve the pressure, the irritation subsides, and is rekindled whenever the parts are permitted to come in contact again. These results are most prominent in disease of the hip joint, following each other in rapid succession as pressure upon the diseased parts is allowed or removed.

To illustrate the effect of pressure upon the head of the femur affected with morbus coxarius, I will give the history of a case, so far as this effect is concerned. The result has been the same in all the cases that have been treated upon this principle.

A little boy, aged 4 years, was put under my care. His eyes were blue, hair light, complexion pale, figure slender. The father has premonitory symptoms of phthisis; the mother had, some years since, Potts' disease. In September, 1858, he was thrown down by another boy, and soon after began to complain of pain in his right knee—at first only during the night—and was a little sensitive about the hip in walking. Leeches were applied in the region of the hip joint; these appeared to relieve the pain, but did not restore the use of the limb; he grew worse until he was confined to the bed.

In February, 1859, I saw him for the first time. There were the ordinary symptoms of disease of the hip joint before the matter had escaped from the capsular ligament, viz., tumefaction about the joint, great tenderness, intolerance of motion, flabbiness of the muscles connected with the joint, flattening of the nates, the limb apparently elongated and drawn towards its fellow, the body leaning towards the pelvis upon that side, nocturnal pains upon the inside of the knee, referred to that region also upon any motion of the limb; countenance haggard and expressive of great suffering; the appetite deficient, except for acids. The slightest pressure about the joint, or movement of the limb, would cause him to cry out with pain.

Extension was made upon the limb, and after the muscles had become wearied so as to allow the head of the bone to come down upon the inferior portion of the acetabulum, the pain was relieved. The little sufferer was able to sleep quietly all night; the tenderness and tumefaction soon disappeared. In a few days the limb would admit of the application of my splint, which allows the patient to take out-door exercise, while at the same time the limb is kept down in the position mentioned.

The irritation of the system subsided with the other symptoms; his appetite became more than usual for a child with limited exercise; his food was well assimilated, for he improved in flesh and his countenance became comparatively ruddy. As he was so much improved, and it being very inconvenient for me to attend him, upon the last of April I gave him in charge of a physician who had watched the treatment from the commencement. About the middle of June, the Doctor informed me that the limb was in a worse state than when I first saw him; that he was confined to his bed and suffered intensely; that the joint was much swollen, and he thought there was matter there; he also expressed distrust of the mode of treatment. Feeling entire confidence not only in the principle but the mode of applying it, and not liking to have it brought into disrepute, I went to see the case, and found his condition as represented by the Doctor. Upon examining the patient, it was evident that it was from a want of proper application of the principle, rather than in defiance of it, that the disease had returned. The limb was dressed as at first, and went on to recover more rapidly than from the first attack. He has played out for a long time. On September 15th I saw him, and he could throw his limb at right angles with his body, and his manner indicated that he had no fear of its causing pain. There is every prospect that he will recover with a perfect limb. Since the last attack, he has had no medicine; during the first, he took the bitter tonics to improve his appetite and power of digestion.

It will be noticed that this patient was relieved from two attacks. After he had quite recovered from the first, the head of the bone was allowed to impinge upon the upper portion of the acetabulum, kindling up the disease, the parts, if healed, not being of sufficient firmness to admit of the labor thrown upon them. In the last attack, the only treatment the child received was to remove the pressure from the diseased surfaces. The patient, from doing well while the pressure was removed, grew rapidly worse while it was allowed, until he was as bad as at first. Again the pressure was removed, and, without any other treatment, he amended, until the disease appeared to be entirely removed.

In all of the cases where this principle has been applied, the same favorable result has followed. This is not a new principle; it is involved in all those attempts to confine the parts and render the joint motionless, either by bandaging the limb, by splints that so far cover the hip as to render it immovable, but more marked in the operation of dividing the muscles connected with the joint, which, by their contractions. press the head of the bone upon the diseased surface. I have been informed that this division relieves entirely the pain, and the patient remains comfortable until union takes place and the muscles begin to contract, again producing pressure, then the pain returns as before.

These facts go far to show the intimate connection between the pain and the pressure, if they do not prove conclusively that they stand in the relation of cause and effect.

The plan adopted by me appears to accomplish this separation of the parts more perfectly than any mode with which I am conversant, while at the same time it admits of passive motion of the joint (a much more natural state for health than one of perfect rest), and free out-door exercise by walking or riding. I can but consider it highly beneficial to keep up motion of the joint, yet not to allow of friction upon the diseased surface. Ulceration indeed may continue when the parts are kept perfectly still, that would stop, if free motion were permitted without friction.

A case in which menstruation is performed without any direct or apparent communication between the cavity of the vagina and that of the uterus, the latter being ascertained to exist in a rudimentary condition. By Bernard Kelly, M.D., Physician to the New York Dispensary. M. C., aged 28, of delicate form, and blond complexion, came under my professional charge about three months ago. She has been married about a year, and menstruates *regularly* every three weeks. The secretion is scant, and of brief duration, continuing usually only one or two days. This condition of the menses induced me to make a vaginal examination, which, to my surprise, revealed a somewhat rare anomaly. The external organs of generation are well developed. The vagina is of the usual calibre, but very short, extending only about two inches from the vulvar ring, and terminating superiorly in a species of irregular *cul de sac.* On the left extremity of this pouch is a sulcus, or valve-like process, which gives to the touch the sensation as if it were of an aperture communicating with the uterus, but which no manipulation with bougie or catheter could corroborate. The employment of the speculum threw no more satisfactory light upon the obscurity of the case, all that had been presented on the field of view being merely a tense, imperforated membrane. The question immediately arose to my mind, as to the immediate and direct source of the menstrual flux. Could it be from the walls of the vagina, or from some secret orifice connected with the womb, and which my means of exploration were unable to detect.

The case being somewhat unique in its character, I thought it expedient, as well as just, to have the opinion concerning it of an able and more experienced head than my own. With this view, I consulted Professor Willard Parker, who kindly tendered his services, and made a very minute and laborious investigation of the case. The Doctor candidly acknowledged his entire inability to trace any direct communication between the vagina and the cavity of the uterus ; indeed the presence of the latter was even a matter of doubt. To decide this question he made an examination *per rectum*, and concluded that the organ existed, but in a somewhat imperfect and rudimentary state of development. In order to ascertain the true seat of the catamenia, he requested me to show him the patient during her approaching period, when the discharge had reached its height. This I was unable to do, from the fact that the Professor was out of town at the time, but was fortunate enough to find a good substitute in his stead, in Dr. Watts.

After a good deal of patient and fatiguing manipulation, the

Doctor succeeded in passing the blunt end of a probe *into, not through,* a very minute depression, situated about the centre of the *cul de sac* of the vagina. The head of the instrument was merely engaged, arrested, so to speak, at this point, but beyond it could not pass without using excessive force, and running the risk of lacerating the parts. This, in all probability, must have been a mere crypt or fold of the mucous membrane, and not connected in any way with the cavity of the uterus. When the part was wiped dry, by means of a pledget of cotton, from the menstrual exudation, no fresh discharge made its appearance. This would seem at least to confirm the opinion that the depression mentioned was not the channel through which the menses flowed. The same fact (namely the persistent dryness of the mucous membrane) was noticed in wiping the secretion from the surrounding walls of the vagina. The detergent process was thoroughly performed, so that the pressure necessarily made on the parts, and the action of the atmosphere having full scope through the cylinder of the speculum, might very effectually arrest the capillary hemorrhage. Be this as it may, the fact stands prominently forward as an element, calculated to lend additional complication and obscurity to the case.

Now some important considerations present themselves to the mind of the physician, on reviewing the whole matter. Here is a patient, who, according to her own statement, and verified by actual observation, menstruates every three weeks with a regularity, in reference to time, which cannot be surpassed; no opening found connecting the cavity of the vagina with that of the uterus; the subject possessing the apparent fragile conformation, and all the other delicate qualities of her sex, a sweet feminine voice; a nervous, timid disposition, so as to preclude all idea of imposture, on her part, from the mind of the practitioner; and, yet, the true source of the menses still remains shrouded in mystery. For my own part, I am inclined to believe that the discharge takes place directly from the vaginal mucous membrane. The imperfectly developed state of the uterus, and the impossibility of finding any patent, natural channel between it and the vagina, confirm this belief. If so, it may then very reasonably be asked, why does not the secretion reappear after being removed in the manner above alluded to? To this question I can return no better answer than the one already implied, when it was stated that considerable pressure had been applied to the parts, and that they were exposed, in this dried condition to the free action of the air.

Such an anomally would not be altogether without precedent. CAZEAUX in his work on midwifery, cites the example of a young woman, somewhat similarly organized to the subject of this notice, who had never been regular (although the *molimen menstruale* had been experienced by her periodically), but twice in her life. On one occasion some months previous to, and again immediately after sexual congress; to the impetuous ardor of which she attributed the appearance of the latter, rather than to any spontaneous effort on the part of nature. In both instances, the discharge must necessarily have proceeded from the mucous membrane of the vagina, since the uterus was ascertained to be congenitally absent, and both ovaries occupied the inconvient position of each inguinal canal, immediately above their external orifice.

Accidental Poisoning by Strychnine.—By Douglas Bly, M.D., of Rochester, N. Y. Saturday, September 13, 1856, Mr. Josiah Montgomery, residing at No. 18 Jay Street, swallowed four grains of strychnine, mistaking it for a powder that had been prescribed for himself. Mr. M., had sometime since procured a quantity of strychnine for the purpose of killing dogs during the hot season, and by some means the strychnine powder and the powder prescribed and prepared for himself, became mixed, and on Saturday night about ten o'clock he took one of the powders which he supposed prepared for himself, but unfortunately it was one of the dog powders, and contained four *grains* of *Strychnine.* He immediately discovered his mistake, and ran into Dr. Swinburns, a few doors distant. Dr. S., immediately prescribed an emetic, which I believe was composed of tartarized antimony, and in a few minutes followed it with another, but both failed to produce any effect, and the ordinary symptoms of strychnine began to show themselves. Seven or eight minutes had now elapsed, and nearly every muscle had become rigid. It was found impossible to administer any more emetics, because the muscles of the jaws had became rigid and held the teeth firmly in contact, and the patient was no longer able to swallow.

I arrived fifteen minutes after the poison was taken, and found the patient lying upon the floor, on his back, convulsed constantly with the severest form of tetanic spasms. At times his whole muscular system was rigid, and he lay in the opisthotonose position, resting upon his head and heels, with the body raised from the floor in the form of an arch. Several of these terrible spasms occurred in the space of a minute. His jaws were firmly locked, and the approach of anything toward his mouth, caused a recurrence of the spasms.

When called I hurriedly supplied myself with tartar emetic, a stomach pump, and chloroform. On my arrival I discovered that the chloroform was the only remedy that could be employed. I gave it by inhalation, and was gratified to see the spasms partially relieved in about three minutes, and completely arrested in ten. If the chloroform was remitted the spasms instantly returned in full force ; it was found necessary, therefore, to keep the patient constantly under the influence of the anæsthetic. Ten minutes after I began its administration, the patient was so relieved that he was able to swallow again, and I gave him a full dose of tart. emetic, which was the third he had taken from the beginning. In about ten minutes more the emetic took effect. Warm water was now given in large quantities and rejected, as often as sufficient quantity was drank, until it was believed that the stomach was relieved of all the strychnine not absorbed. All this time it was necessary to continue the chloroform to control the spasmodic action of the muscles, caused by the strychnine already absorbed, which must have been no smal amount; as thirty-five or forty minutes had elapsed, between the taking of the poison and the first emesis. If the chloroform was stopped at any time, the spasms immediately returned, therefore I was obliged to continue the chloroform until the next morning, when the patient was out of danger.

At six o'clock I left him quiet and comfortable. The first decided symptom of returning ease occurred at three o'clock, when the patient requested a chew of tobacco, in which he was indulged. From the time the tetanic spasms ceased, the patient rapidly recovered, and in forty-eight hours considered himself entirely recovered.

EDITORIAL.

A New Artificial Leg.—We have been favored by Dr. Bly, of Rochester, N. Y., with the accompanying Illustrations of an artificial leg, which he has lately introduced, and which has, we believe, proved very satisfactory to those who have used it.

Fig.1

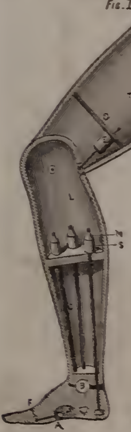


Fig. 2

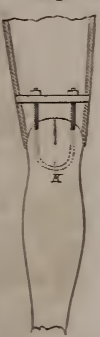


Fig.3.

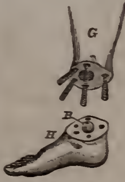


Fig. 1 is a section of the Artificial Leg. The ankle joint is formed by a ball *(B)* of polished ivory, which is a joint that admits of every motion that the natural ankle does, without an exception.

The cords *(C)* assume the position and functions of the natural tendons. Only three of the five are shown in full, but the ends of all are seen in *Fig.* 3. *S* is three of the five rubber springs, which take the place of the muscles of the natural leg. *N* is the nuts, by which the tension of the cords and springs are regulated to suit the wearer. *E* is the spring which operates the knee joint.

Fig. 2 is a posterior view of the leg and thigh; the thigh in section—showing the knee cords *(K)* which take the place of the crucial ligaments of the natural knee.

Fig. 4

Fig. 5.

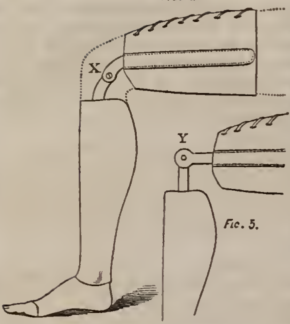


Fig. 4 shows the curved joints (*X*) on either side of the knee, as constructed for amputations below the knee. The curve corresponds with the natural knee, and allows the pants to set smoothly.

And *Fig.* 5 shows the joints (*Y*) for the same purpose, as constructed by some makers.

Fig. 6. The right leg of this figure shows one of these Legs, worn by a mechanic, and flexed laterally at the ankle joint, the same as a natural leg. It assumes every other position of the natural leg with equal facility.

Fig. 6

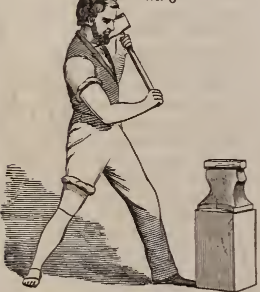


Fig. 8

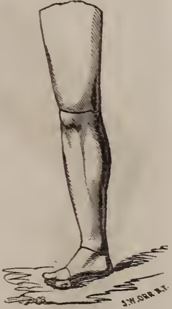
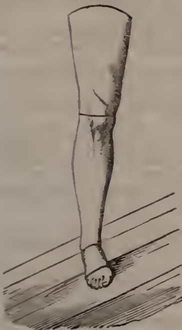


Fig. 8 represents the ankle joint flexed diagonally, as is often the case when one side of the foot happened to be placed on a small stone, or other obstacle.

Fig. 9 shows the action of the ankle joint when walking on the side of a hill, or on an inclined plane, the foot accommodating itself to the surface, like the natural foot.

From the inventor's statements, we gather the following facts: —The joints in this leg are made without iron or any kind of metal, therefore the leg is extremely light. The liability of metallic joints to rattle and make a noise, after the leg has been worn

FIG. 9



a short time, is well known, and the annoyance which it causes the wearer at every step is also well known. Now, as there is no metal about the joints in this leg, there is no noise. The ankle joint is formed by a ball of polished ivory, plying in a socket of vulcanized india rubber. This joint accomplishes the great object which the Artificial Leg makers have hitherto sought for in vain, viz.: it admits of motion in all directions, like the natural ankle joint, and thereby allows the artificial foot to accommodate itself to the varied inequalities of the surface, the same as the natural foot.

In the places corresponding to those occupied by the muscles of the natural leg are placed rubber springs, with catgut cords of sufficient strength, extending downward in place of the natural tendons. These rubber springs or artificial muscles, together with the ball and socket joint, produce every motion of the natural leg, without an exception.

The springs are made of railroad car spring rubber, and used by compression, therefore it is not possible to overtax or break them. The power and action of all the springs in this leg, are regulated simply by turning a nut, so that the wearer may adjust them to suit his own peculiar gait, with the greatest facility. Instead of the mechanical motions given to a limb by metallic springs, the rubber springs impart easy uniform motions to the limb, like those of the natural muscles, which give it, when in use, a remarkable life-like appearance. In walking, when the weight of the body rests upon the ball of the foot, the spring representing the gastrocnemius and soleus muscles is firmly compressed, and when the weight of the body is thrown forward on to the other foot, the spring rises and carries the foot forward to its place, with very little effort of the wearer.

In ordinary walking, with the toes turned outward, the foot, like the natural one, is flexed diagonally, or in the line of motion which makes a graceful step. All artificial legs made heretofore, roll the foot to compensate for this diagonal flexion,—hence the uneven gait so often seen. If the foot is turned out sidewise to brace the body, or to work at a bench, as in many kinds of mechanical labor, the ankle joint flexes laterally, and the foot remains flat on the ground, and gives a firm base of support, which is of great importance in all kinds of labor.

We have not sufficient practical acquaintance with this leg to give an opinion of its merits. Use alone can determine its true value.

The Scientific Record is the title of a Physician's [illegible] list about to be issued by Bailliere Brothers, which will afford to the practitioner facilities for keeping an accurate daily record of his cases.

The College of Physicians and Surgeons began its winter Session Oct. 17, with an introductory address by Prof. Clark, on the life of his late colleague, Prof. Elisha Bartlett.

The University Medical College opened its annual course Oct. 17th, with an introductory address by Prof. Van Buren.

The New York Medical College commenced its session with an address by Prof. Bryan, on the Medical Profession and its claims.

At the New York Ophthalmic Hospital, Dr. Stephenson delivered the introductory lecture to his course on Ophthalmic Surgery, Oct. 22; his subject being—The Pains, Pleasures, and Responsibilities incidental to Professional Life.

The Course of Clinical Instruction in Bellevue Hospital formally opened on the 17th of October, with addresses by Dr. Francis, President of the Medical Board, and Drs. A. H. Stevens, Metcalfe, and Gilman. The class in regular attendance is large.

A Sanatorium, or Private Retreat for the treatment of diseases of women has recently been opened in this city, and is to be in charge of W. Elmer, M.D., and L. Elsberg, M.D.

Dr. Eli Ives, of New Haven, now eighty-one years of age, has declined the office of Secretary of the American Medical Association, and Dr. Stephen G. Hubbard has been appointed in his place.

The Physician's Visiting List, and the Physician's Hand-Book of Practice—the former published by Lindsay & Blakiston, of Philadelphia, the latter by W. A. Townsend & Co., of New York—are issued for 1860.

Dr. Macfarlan, of this city, calls our attention to an article which he published in this Journal of November, 1854, in which are detailed four cases of croup treated by quinine.

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